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Original Articles.

PNEUMONIA AND ITS TREATMENT.[1]

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WHAT is pneumonia? That question correctly answered, we will be prepared to treat it. Professor George B. Wood, of the University of Pennsylvania, one of the most accurate describers of disease and a practitioner of great eminence, to whose graphic descriptions of disease many of you have listened, says in his *Practice of Medicine*, that "pneumonia has three stages, and is universally applied to inflammation of the lungs. In the first stage the lungs are merely engorged with blood, and the air-cells partly filled with a sero-mucous, somewhat bloody effusion. In the second stage a plastic extravasation has taken place, and the cells are filled with more or less concrete and bloody lymph. In the third stage the place of the plastic secretion has been supplied by a puru lent fluid." Dr. Wood was a truthful man, had great opportunities in the Philadelphia Hospital to see the condition of the lungs in the different stages described by him, for they may all be present in a lung at the same time, when the disease continues to embrace fresh portions of it. In that I doubt not he is correct. But as the subject which now engages our attention is one of great importance, I beg you to bear with me while I quote from another author. Dr. G. R. Martine, of Glens Falls, N. Y., in a paper read before the American Medical Association in June, 1889, published in its journal September, 1889—a paper remarkable for its accurate description of the disease as its exists in cases involving much of the lung, and for erroneous deductions in relation to treatment—thus speaks:

"The first abnormal symptoms, after the premonitory chill, is the quickening of the pulse and the consequent increased flow of arterial blood. Now, if we could take a microscopic view of the minute arterial ramifications in the lung structure, we would discern a distention in the caliber of the air-vessels in order to accommodate the augmented flow of blood; and if we would then glance at the veins we would observe the plasma layer rapidly filling with white corpuscles, and the walls of the veins, irritated by the friction of increased circulation, would exhibit, here and there, white corpuscles adhering to their tenacious sides and finally penetrating their walls. A glance at the capillaries would show not only the white, but also the red corpuscles forcing their way through the overstrained capillary walls until the surroundings become engorged by their extravasation, and hepatization has commenced." Now, if we bear in mind the condition of the lungs as described by the writers, we must believe that pneumonia is first a congestion, then an inflammation, and if that be not arrested suppuration takes place. Dr. Wood says: "It has been doubted whether a cure is ever effected in this last stage."

We are now brought face to face with the disease. Is there anything we can do to remove the congestion? The patient has been sick less than twenty-four hours, he is not yet expectorating bloody sputa, and many of the opponents to blood-letting say this disease cannot be aborted; that, like measles, it has a course to run, despite all interferences; that it is a constitutional disease, and that if we can prevent the congestion from being too suffocative, the inflammation from involving too much of the lung, we may let it run its course.

The members of our profession are divided into two classes: those who believe that the disease may be aborted, *i. e.*, arrested in the congestive stage if early called, and in the stage of inflammation before suppuration has taken place; and the much more numerous class, who believe that it cannot be aborted; that a case, even if it be in its incipiency, must go on—should be watched by the physician and shorn of its power to take life, but be allowed to go on until a

[1] Read before the Philadelphia County Medical Society, April 13, 1892. President John B. Roberts in the chair.

crisis is reached after a positively fixed number of days. Physicians of the first class aim to relieve the overloaded and suffering lung by the abstraction of blood, by means of the lancet, from the veins of the arm; and those of the second class, who boast that they "never bleed" in any disease, depend on giving relief by reducing the increased action of the heart with medicines which have that effect. But the members of this latter class are greatly divided in opinion as to the proper medicine to be used to hold the heart in check. What one regards as being very useful and safe, another considers dangerous—more dangerous than the disease, and withal inefficient—yet all speak from experience, each one with his remedy. Experience is a harmful thing, as a reason for continuing to practice a certain course, unless it has been a successful experience. It reminds me of a case:

I had attended a woman in her confinement, and, as she expected to have the child raised by hand, as the phrase goes, and had read my paper on "Food for Infants," she desired me to speak to the nurse about her mode of feeding the child; so, when she appeared, I said: "Nurse, do you know how to feed a child so as to rear it without the mother's milk?" "Oh, yes! I have had experience in doing that; my sister had three that I had to raise that way." "Well, how did they come on?" "Oh! very well; one of them lived until it was six months old." Who among us but can look back on measures which we practised, and which we believed indispensable because we had proved them, as we thought, by a long experience, but which we now see were not only useless but injurious. This, then, successful experience in the treatment of pneumonia is what we should follow. The absence of success, the fearful mortality attending the arterial sedative practice of the "no blood to spare" party; the immediate relief, the successful arrest of pneumonia by blood-letting, during a whole century, should cause the opponents to venesection to cease their abuse of those whose successful experience in the use of it has been testified to by some of the most eminent men of this city and this country.

A few weeks ago I was told by a gentlemen, holding a high State office, that a physician of whom he inquired concerning the recent death of a prominent man, replied: "Oh! he was murdered by blood-letting." Does this man, who speaks so boldly about a measure of relief of which he knows nothing from actual experience, who never used the lancet in his lifetime, denounce Prof. George B. Wood, Physic, Parrish and the elder Hartshorne, Chapman, Samuel George Morton, Ezra Michener, Prof. Henry H. Smith, the Atlees—John and Washington—Traill Green, Henry Hartshorne, Jackson, of Northumberland, N. S. Davis, Prof. S. D. Gross, and hundreds of others who could be named, as conscientious as himself and far more truthful? We have borne this stereotyped abuse long enough. Look at the terror spread over the country now, when these numerous deaths of the best of our people are every day announced, though all were in the hands of practitioners skilled in arterial sedation. Let us now see what the opponents of blood-letting resort to, to save the sufferers from death in this disease. From what I have learned of the present teachings in our colleges, and by conversations with practitioners, the main object is "to keep down the pulse"—that is the phrase. To do this, the most approved medicine is the fluid extract of veratrum viride.

"The object aimed at," says Dr. Martine, "is to hold the pulse below 80;" and adds, "*that* is not only what should be done, but what *must* be done to save life." I know full well *that* is not necessary. Scores of times, after I have bled freely, with great relief to the patient and arrest of the disease, the heart, though tamed by the bleeding, continued its pulsation at from 80 to 100 per minute, or sometimes even more, for two or three days, and yet the convalescence went on. Again, he says: "With what remedies do I hold the pulse at this point (below 80)?" and adds, "veratrum viride seems to have served one best." To this, Dr. H. A. Hare, who was present at the reading; replied: "A great mistake is made in saying use cardiac sedatives in pneumonia, without recognizing the fact that they are to be used only in the first stage, before congestion has gone on to consolidation; the man who gives such drugs at the middle or end of an attack of pneumonia, might as well stab his patient. Digitalis is to be used at such times." It, therefore, appears that it is only in the congestive stage that veratrum is to be used. If this be true—and doubtless it is based on experience—how many patients have been sent to their graves by this much-used medicine! for well do we all know that it is the most used of all the arterial sedatives to keep down the pulse. And even Dr. Martine has peremptorily declared that it must be kept down, and that veratrum viride seems to have served him best. But it is not only Dr. Martine who disregards the stage of the disease, and uses it in all stages if the pulse be above 80. I have long believed that nearly all the cases of pneumonia which terminated in death within four days, and I know several such were hurried there by this patent and dangerous drug. Dr. I. E. Atkinson, of Baltimore, followed Dr. Hare, and said that "the use of veratria in the treatment was not new; it had been several years under trial, and had not received general acceptance." If Dr. Hare's utterances be true, then veratrum viride can scarcely be used at all without killing the patient, for a physician is seldom called until the congestion has passed into the second stage, when, according to Dr. Hare, you might as well stab the patient as to give it. How unerring must be the diagnosis, in order that this medicine may be given without risking the life of the patient. I have inquired of many of the "no blood to spare" class, and have rarely found two that have the same treatment. Those who use aconite are afraid to use veratria, while the latter regard aconite as being more dangerous and less efficient. Those, too, who use digitalis are afraid of the two drugs just named, and those who give 2 drops every two hours denounce others who give large doses of it (10 to 20 drops, frequently repeated) as pursuing a most dangerous practice. Judging from the accusations made by themselves against each other, what safety is there to the patient? The answer comes in saddest tones from homes made desolate by dangerous arterial depressants. To the two classes of opponents to blood-letting spoken of, there are others which should have a passing notice; first, those who rely on the use of sulphate of quinine to keep down the pulse, and to diminish the heat of the body. While quinine is, in malarial diseases, an unrivalled medicine, and has done valuable service, it is useless, if not really most injurious, in the treatment of pneumonia and other inflammatory diseases. We should feel greatly indebted to Dr. Horatio C. Wood for the experiments which proved to him that even very large doses of that medicine cannot hold the temperature of the body at a low figure. There was so much stress laid on the importance of preventing heart failure, by keeping down the temperature by means of quinine

above all other medicines, because of its tonic powers, that Dr. Ripley, the two Drs. Jacobi, and three other physicians of New York City made careful and repeated experiments to determine the value of the drug in that respect, and demonstrated beyond cavil that it is never useful, and often greatly objectionable —really injurious—in the treatment of pneumonia. I have often felt exceedingly thankful to Dr. Wood and the New York doctors for their careful and effective labors in that direction, and greatly amazed that, in the face of the assertions that quinine is useless in pneumonia to effect the purpose for which it is used, some persons still persist in its use. Many lives have thus been lost. The second class of those who fraternize with the arterial sedative practitioners is composed of the whiskey or stimulant practitioners—the physicians who see typhoid and blood-poison symptoms in almost all diseases. I will spend but little time with them. They are belated people, clothed in, and proud of, the cast-off garments of progressive physicians. Let us look camly at this subject. Are there physicians here who can say that there are medical properties in whiskey or in brandy which, in either large or small doses, warrant us in trusting the life of a patient to their action? It is a serious thing to experiment with human life. No means but those which have proved successful in numerous cases should be used when our patients are struggling for breath, and death hovering over them. There is nothing more saddening to me in the sick-chamber than to see a physician forcing alcoholic drinks on the dying patients, and yet it has been done countless thousands of times, and now oftentimes they are used in the very earliest stages of pneumonia. Dr. N. S. Davis does not believe them essential in any disease. If, then, arterial sedatives, quinine and alcohol are not adapted to relieve the congestion and inflammation of the lung, which constitute pneumonia, is there any remedy for that now fatal disease? We know that there is, but not from an experience like that of the nurse already named, nor of another one, greatly experienced, of whom allow me to speak. I was called to a child, lying on the lap of a friend, "because she had had experience with such cases." I said, "The child seems very sick." "Yes," she replied, "it has summer complaint, and it will die." "How do you know it will die?" "Oh! I have had experience; I have had ten of them with it." "All your own children? Did they all die." "Yes." "Did you have the same doctor for them all?" "Yes." "Well, your experience is worth nothing." I treated the child, and, to her disgust, it was soon well. Her experience is a fair type of the experience of those physicians who go on with the same fatal treatment, lose one patient after another, and speak of "experience" in treating the disease.

But now a word about those who "murder" their patients by bleeding them. What are the objections urged against blood-letting? and by whom? The first objection is, "No one has any blood to spare." If this be true, then it embraces all other objections, and none need be named. This certainly means that in health, as well as in disease, the loss of even a small quantity of blood would be injurious to the loser of it. It means more than that—means, as is boldly asserted, that it is a permanent injury to the body, the bad effect of which is seen in the permanently weakened system of the person. Thousands of facts disproving this, and which are daily before our eyes, count for nothing. One would suppose that if half a dozen, or even one, of the respectable, truthful men here should declare that he had often bled persons in various diseases with the greatest benefit to them, nothing more would be needed to prove the falsity of the declaration, "No blood to spare"—a cry so senseless, so false, that no decent man should utter it.

The very first act of these objectors after the birth of a child, in cases attended by them, is deliberately to cut the cord and waste two ounces of blood that ought to have passed into the body of the child.[1] But there is another objection urged, viz., that even in the earliest stage of the disease under consideration, though some relief may be obtained, no blood should be taken, lest it should leave the patient too weak to resist the exhaustion of a later stage—leave him in a condition in which even whiskey and rich food would, though pushed, not be able to save him from death.

Is it, then, injurious to take blood from a pneumonic patient?

This is the cry and the charge of those who have never seen a patient bled, and yet who have known its safety and value to be testified to by some of the most eminent physicians who have ever lived in this century or preceding ones. In my last four papers, published in the *Medical and Surgical Reporter*, I have given a few cases reported by the Conshohocken doctors, which were bled freely, and were so successful that opposition to venesection should be silenced in those who read them. I will now speak of some seen by myself, and in doing so will present some views which I have long held:

On February 16, 1887, I was called to see a physician two days after an acute, serious attack of pneumonia. I found that he was under treatment by one "who never bleeds in any disease." He was expectorating the bloody, "rust-colored, prune-juice" sputa, a quantity of it being in the basin; had great oppression and that peculiar sense of great weakness so constant an attendant in pneumonia when the obstruction to free breathing exists. I had to wait nearly three hours for the return of the physician, and when he did come he was opposed to bleeding, and refused to accede to it, but proposed that the patient choose whether or not he would be bled. The patient knew well our different modes of treatment, and promptly said, "I will be bled." I asked the doctor to remain, and, slipping another pillow under the sick man's head, I drew blood until I found the pulse yield in force, and I knew that faintness was approaching. Withdrawing the pillow to lower the head, I closed the vein and took a seat. In about ten minutes I inquired, "How do you feel?" "I am much relieved; I think it will do me great good." This was at noon. Went again in the evening; he was pretty comfortable, breathed much more easily, and had not coughed up the least particle of blood or rusty sputum since the bleeding. The distended blood-vessels were relieved of their fullness, and "the slow exudation from the inflamed vessels" spoken of by Dr. Wood was no longer forced through their coats. Would one or twenty doses of arterial sedatives have produced that effect? Having bled my patient, what next did I do? Nothing, but told him that I would see him in a few hours.

And here let me say that, in the case already alluded to, when I saw by the papers that he had been bled, I said, "In all human probability he will die!" "Why?" was asked. "Because he was timidly bled by one unused to venesection and fearful

[1] See Transactions of the Penna. State Med. Soc., for 1872, p. 154.

of it, and because the other depressing, arterial, sedative treatment will follow it, and the patient will suffer from their poisonous, depressing effects.

To return to my case: When I saw the patient a few hours afterward, I found him pretty comfortable. I directed one Dover's powder, to be repeated in the night, if need be, because of pain. Next day a mild diaphoretic was administered.

Two days after this a physician who, as a neighbor, had given much attention to his sick friend, asked me: "How do you find your patient?" I said: "He is well; he needs only a few days in bed to regain his strength." I left for home, and he went to the patient, and said to him: "The doctor told me just now that you are well. What was it that cured you? Was it that blood that came from your arm?" He replied: "The blood did not come from my arm; it came from here," laying his hand on the affected side. "I felt it going from here as it went into the basin." How strong this testimony, given by a physician who felt in his own person the relief obtained by venesection! How confirmatory, too, is this of the testimony of Dr. Gross, the elder, who, in a discussion, had in the State Medical Society, illustrated the effect of venesection in this way: "Should a man have an inflammation of the conjunctiva, and the capillary vessels be so injected that the blood was of a deep redness; and then he, being in a sitting posture, should be bled largely, the blood would be drawn from the capillaries, and the redness disappear. Just so does it draw the blood away from the capillaries of the conjested and inflamed lung." Veratrum viride, in doses large enough to keep the pulse below 80, would not produce the least relief to the distended capillaries. Having bled the patient, if in a few hours there is not much relief, he may be bled again, if needful, and even more than once. But what of local measures? Do I approve of the poultice or the pads of cotton to envelop the chest? No. Two years ago, after my criticism of Dr. Wells' paper was published, an aged physician regretted that I had not spoken of the value of "the blister" over the affected part. The subject before me was only that of "Blood Letting: Its Value or Danger." It is the same now, but I may add here that the application of cloths dipped in ice-water is to the patient the most agreeable application that I have ever used.

Despite the great length of this paper, I beg of you to hear the utterance of one of our most eminent men to his students, at his clinic in the University Hospital, and published in the February number of the *International Medical Magazine*, pp. 43–45. Dr. William Pepper stated to his pupils, at the clinic, that "the man of twenty-eight years had been well until ten weeks before his admission to the ward, and had during that time been treated by several physicians. On admission, November 5, his distress was extreme; he was unable to lie down or recline, and was obliged to remain constantly in a sitting position, but did not get relief from leaning forward." Then follows a long and interesting account of the illness and treatment; after which follows: "On November 7, the third day of his stay at the hospital, the symptoms were so alarming, with deep cyanosis, labored action of the heart, orthopnœa, and high fever, that I had him bled from the arm to the extent of twenty ounces. The good effect of this was immediate, and although cyanotic symptoms returned to some extent on the following day, a material improvement dated from the time of the venesection." Again, the learned professor, at great length, gives his views of the case, and before closing his paper remarks (January 5): "He has continued to do well, and is now thoroughly convalescent. Before closing, I would call your attention to the extraordinary effects which followed the abstraction of blood. All of us who saw his condition before the bleeding, and watched the immediate effect of this, was satisfied that his life was saved thereby. I doubt if any other remedy could have acted so promptly and efficiently. It was the observation of such striking results, when bleeding was used in suitable cases, that gradually led our medical forefathers to rely upon it more and more in grave crises, until its occasional and legitimate use degenerated into almost promiscuous abuse. It is one of the tasks set before clinical medicine to-day to indicate with the greater precision, rendered possible by our improved methods of investigation and more full knowledge of the natural history of disease, the exact conditions under which this most powerful remedial measure is to be adopted."

Such are the recent utterances of the able editor of *A System of Medicine by American Authors*, in which is a paper by Alfred Loomis, M.D., Professor of Practice in the University of New York, who believes "pneumonia is a constitutional disease, with a local manifestation," and regards blood-letting as a dangerous plan of treatment. Such, too, has been the views taught to large classes of students by Professor Pepper until he made trial of the remedy. I sincerely hope that Professor Loomis, too, will make a trial of it hereafter, and be induced, like Dr. Pepper, "to doubt that any other remedy could have acted so promptly and efficiently."

I cannot be too grateful to Professor Pepper for his valuable testimony in relation to venesection, and for the hope which he has given us, that hereafter he will not withhold this potential means of relief from those suffering in the grasp of this (now) too fatal affection. It is one of the most remedial diseases when properly treated, but when managed by arterial sedatives and their aids, stimulants and excess of food, a most fatal one. More than sixty-five years of careful, anxious observation of the effects of blood-letting in pneumonia have proved to me that it has no rival as a remedy for that disease.

DISCUSSION.

DR. WILLIAM PEPPER: I think great praise is due to Dr. Corson for the faithful and able manner in which he has kept before the profession the importance of blood-letting in certain conditions of disease, and especially in pneumonia. While not prepared to admit its necessity as a remedy in all cases, I must state that I find myself confronted—not rarely—with a group of symptoms indicating oppression of the heart, and approaching cyanosis, which yield to prompt and moderate venesection as to no other remedy. So that with continued caution, but, on the whole, with increasing frequency and confidence, I find myself resorting to it.

DR. JAMES C. WILSON: We must all regret the absence of Dr. Corson to-night; we shall certainly in the discussion miss his firm convictions, his ready retort, his wit, and the results of his ripe experience in this matter, which for so long a time has been so near his heart. It is certainly most interesting to hear this paper, a continuance of a series of papers in which this determined, clear-headed man at the age of ninety years continues to uphold his position in regard to the treatment of pneumonia. In listening to the paper it has been impressed upon me that I am in neither of the camps referred to by Dr. Corson. I

must indorse what has been said by Dr. Pepper in regard to venesection. We all recognize the occasional necessity for venesection in the early stages of croupous pneumonia. It often gives relief from urgent dyspnœa and pain, and sometimes even appears to save life. It cannot, however, be regarded as a specific treatment. It must be considered as symptomatic. I do not find myself in the camp of those who are prepared to adopt venesection as a routine treatment in pneumonia. On the contrary, I feel that my experience is opposed to this or any routine treatment.

I find myself equally out of place among those who rely upon the group of remedies known as arterial sedatives. I read from a paper[1] which embodies some views that I have expressed in regard to the treatment of pneumonia.

The paper speaks of various methods that have from time to time been largely employed and have gradually fallen out of use.

"In the same manner we condemn the treatment by tartar emetic in large doses, and with it is to be relegated to the limbo of discarded medicaments in pneumonia Trousseau's lauded *kermès*. The treatment by large doses of veratrum viride in the early stages, which still survives and finds in many quarters earnest advocates, is based upon the same antiphlogistic idea and has little to commend it. To add the depressing effect of a powerful drug to the pathological influences already depressing the heart is now recognized as increasing the danger of cardiac failure. In fact, if, as our knowledge of croupous pneumonia indicates, many of the symptoms are due to a toxæmia, it were better to bleed the patient, if he is to be bled at all, into a basin than into his own vessels. To depress the heart by veratrum viride or aconite in the first stage, and to harass it by digitalis at a later period, are among the vagaries of a therapeutic which takes pleasure in vaunting itself as rational. To give cardiac depressants in croupous pneumonia is always of doubtful expediency, and digitalis as a cardiac stimulant should be administered only in response to special indications. Of the latter drug Brunton says, 'It is of little use in pneumonia.'"

The difficulty of determining the value of treatment in pneumonia, it appears to me, lies in our inability to estimate the part played by treatment in the ultimate results in a large collection of cases.

"Croupous pneumonia occurs with great frequency in connection with other diseases. It is not uncommon during convalescence from acute infectious processes. Those who suffer from chronic Bright's disease and from valvular and degenerative diseases of the heart and from organic diseases of the nervous system are especially prone to it. It not unfrequently occurs as the terminal condition in these affections and in other constitutional diseases, such as diabetes mellitus and pulmonary phthisis. Under these circumstances, it preserves, however, its own clinical and anatomical characters, and must be regarded, not as a mere complication of preëxisting pathological processes, to which it has no essential causal relation, but as an entirely independent intercurrent disease.

When we consider the modifications of pneumonia under these circumstances, and in the different periods of life from childhood to old age, and in alcoholic subjects, we are impressed with the uselessness of attempts to show by statistics the value of different plans of treating the disease. No general percentages of mortality can be relied upon as indicating the efficacy of a treatment, unless they are on a large scale and in connection with a critical analysis of the condition of the patients. It is a question of the seed, which is probably always the same, and the soil, which is definitely modified. The only reliable test of the value of treatment is its effect upon the general course of the disease, a test which is much influenced by the personal equation of the observer. For this reason plans of treatment once in vogue, credited with surprising results in reducing the mortality of the disease, have failed to stand the test of time and have passed into disuse. And while the profession unites in striving after some specific treatment for other infectious diseases, the present drift of opinion in regard to croupous pneumonia seems by common consent to be in the direction of a vigilant expectancy with active treatment of symptoms as they arise.

"Whether we regard acute lobar pneumonia as a specific inflammation, or, in the language of the day, as an acute infectious febrile disease, of which the pulmonary lesions are merely a localization, we recognize in its causation three factors—a pathogenic bacterium, a predisposition, and an exciting cause—in other words, the seed, the soil and the implantation. Nothing in the process is more obvious than its specific nature.

"Pneumonia cannot be regarded as a simple inflammation. This being the case, the antiphlogistic treatment of former times scarcely deserves discussion. Indiscriminate blood-letting as a routine treatment for a specific pathological process, the natural history of which shows it to be self limited and of comparatively short duration, is not in accordance with modern therapeutic principles. Still less are repeated venesections and bleeding *ad deliquium*."

It seems to me that we are fighting over the old battles that were fought almost a century ago in regard to the treatment of antiphlogistic fevers. No one now regards typhus or enteric fevers as inflammatory diseases. No one regards scarlet fever as an inflammatory disease, yet we know that toward the close of the last century and in the early part of the present century, when fevers were considered to be varieties of the fever, fever was considered to be a manifestation of inflammation, and not only was its treatment by venesection discussed, but it was pretty generally practised. Almost all physicians of a generation later than that of our distinguished friend have come to regard pneumonia as a specific infectious process. Nobody now holds that a specific disease should be treated by venesection. We have here to deal with a self-limited disease, a disease of short duration, and a disease which, in the majority of cases, tends toward recovery. To bleed as a routine measure is to add in a large number of the cases that come under our care the ill born effects of depletion to the debilitating influence of a specific inflammation attended with a depressing toxæmia. Therefore, it seems to me that it is scarcely worth while to oppose a plan of treatment based upon a conception of the pathology of the progress which is no longer tenable.

To bleed, however, for the relief of the dyspnœa, to bleed for the relief of the over-distended right heart, is not only clearly a duty in certain cases, but I believe that it is a duty which is often omitted to the disaster of the patient. I myself have had unfortunate results in the cases of pneumonia that I have bled. I have bled but few cases—they probably do not number more than four—and every case that I have bled I have lost. I have bled freely and without hesitation.

[1] *The Medical News*, December 20, 1890.

In the treatment of pneumonia we must pursue a plan of vigilant expectancy. I am opposed to the use of large doses of digitalis in the later stages, during the period spoken of as that red hepatization, after the exudate has undergone coagulation and has established in one lobe or in the whole lung a marked obstacle to the circulation. It seems to me that the use of digitalis under these circumstances throws work upon the heart which is unnecessary, and tends further to harass it. In regard to the expectant treatment, the whole history of the disease, viewed from the standpoint of its specific nature, seems fully to justify in the present state of our knowledge, an armed expectancy; a method of treatment in which, on the one hand, stimulation is not practised, and, on the other hand, depletion is avoided, in which there is relief of the symptoms with a use of proper hygienic measures, and the disease is allowed to run its course just as we feel obliged to allow the other specific self-limited infectious diseases to run their course.

DR. J. M. ANDERS: In the first place, I think Dr. Hiram Corson is to be congratulated heartily upon the uniformly good results obtained from free bleedings, and, in the second place, he is especially to be admired for his courage in bleeding during these long years, indiscriminately and without hesitation. Now there are a great many men, it is true, who are not in the same camp with Dr. Hiram Corson. The speaker who preceded me stated that he was not in favor of indiscriminate bleeding, and that he bled simply for subsidiary reasons and purposes. In that opinion I heartily concur. But, gentlemen, the results of bleeding, as practised by Dr. Hiram Corson, are certainly unparalled for excellence; and, hence, it will not do to say that his cases got well in spite of the treatment, on the one hand, nor to say that these cases would have gotten well without treatment, on the other hand. It, therefore, seems to me that we are put to the task of finding an explanation for the good results of repeated large bleedings in the hands of Dr. Hiram Corson.

I have myself bled but very few patients with pneumonia. About ten years ago I promised Dr. Hiram Corson that I would bleed my pneumonia patients, which promise I have kept only in part. Soon after that I met with a case of sthenic type in a male about forty years of age, with full, bounding pulse, flushed face, high arterial tension, and marked nervous excitement. I withdrew about twenty ounces of blood. This seemed to quiet the heart, diminish arterial tension, and allay the nervous excitement, and the patient made a rapid and good convalescence. Sometime afterward I met with another case in which I tried bleeding, but with a fatal termination. This case was not one of purely sthenic type, nor was it one, strictly speaking, of asthenic type. It seemed to occupy a middle place. I withdrew about twenty ounces of blood and did not repeat the bleeding. Now, according to the remarks of Dr. Corson, I probably bled timidly. I saw a third case in which blood-letting was performed, in the wards of the Episcopal Hospital. This case was in the hands of a colleague, and I agreed with him that bleeding might be of some service, although the patient was practically moribund when the procedure was resorted to, and it reached a fatal termination in a short time. The case was one of sthenic type, with more or less congestion around the seat of consolidation, which evidently had been followed by œdema.

The chief reason—at least so it seems to me—why Dr. Hiram Corson's results have been so regularly favorable is the fact that patients living in the country and suffering with pneumonia, generally present the sthenic type of the disease, while, on the other hand, cases occurring in large cities like Philadelphia very generally do not present the sthenic type, but rather the asthenic adynamic type. When a patient of the sthenic type presents himself, it seems to be far better to bleed than to give arterial sedatives—better than to give veratrum viride or tincture of aconite. The bleeding will most certainly quiet the heart's action, lower arterial tension, and allay more or less the nervous excitement, and will remove a portion of the burden from the heart without robbing it of much, if any, of its power. It is true that veratrum viride or tincture of aconite will also relax the blood-vessel walls, will also quiet the heart, but all of the indications fulfilled by these drugs, and I say it without hesitation, do so at the expense of heart power. The same is not true of blood-letting—at least, not to the same degree. Veratrum viride and tincture of aconite, while relaxing the vessel walls, also act as cardiac depressants.

I gather in the next place that Dr. Hiram Corson has had good results from blood-letting in the second stage of the disease. It is hard to understand how bleeding at this stage can be of benefit, unless, as Dr. Wilson has explained, under certain circumstances, we thereby relieve an over-distended and dilated right heart. On the other hand, it is to be remembered that in the second stage of pneumonia, as in the first, the fibrin factors of the blood are three or fourfold what they are normally. Hence, under these circumstances, large bleedings, by diminishing this tendency will lessen the liability to the formation of cardiac thrombi, and, to my mind, cardiac thrombi are frequently the chief cause of a fatal termination. At all events, thrombi are followed by dilated right heart, venous stasis, and death.

I do not believe that blood-letting exerts any good local effect in the second stage. The only way in which bleeding can affect favorably the lung, is when we have such complications as congestions around the seat of consolidation, followed by œdema. Bleeding then acts according to ordinary hydraulic principles, and only in this way.

The method pursued by myself in the treatment of pneumonia is very briefly as follows, and in stating the method which I have pursued for a number of years, I shall perhaps bring out a few points bearing upon the paper of the evening. During the first stage of pneumonia, as I have already said, I have bled a couple of times. My usual method, however, is to give morphine hypodermically, as recommended by Dr. Alfred Loomis, of New York. Perhaps the chief reason that I have not bled is because I have not met with a purely sthenic type of the disease. During the past winter I, however, saw two cases that apparently belonged to this type, but as they both followed la grippe, I was timid and did not bleed. Since they have died, I have regretted that I did not bleed them. I give morphine in doses of $\frac{1}{6}$ to $\frac{1}{4}$ of a grain repeated every eight or twelve hours. Morphine fulfils several indications fulfilled by blood-letting; it quiets the heart's action; it relieves pain; it guards the heart, and at the same time gives rest and comfort to the patient. In addition to morphine, or if it does not suffice to allay arterial tension, I use local blood-letting, applying several leeches and withdrawing 6 to 8 ounces of blood, and repeating this if necessary. If leeches be not convenient, I sometimes resort to wet cups, withdrawing about the same amount of blood. It is hard to explain the

effect of local blood-letting on physiological grounds, yet of the efficacy of this method I am thoroughly convinced. It does diminish arterial tension and nervous excitement, and gives relief from pain.

In the second stage of pneumonia the indications, so far as the local trouble is concerned, are, it seems to me, the reverse of what they are in the first stage. In the first stage the blood-vessels are dilated, but in the second stage the blood-vessels are, as a rule, compressed. Their lumen is diminished. The obstruction to the pulmonary circulation is greater than in the first stage. In the second stage the indications are for the use of stimulants, but alcoholic stim ulants should be supplemented by the administration of strychnine. Strychnine certainly fulfills certain indications not met by alcohol. Especially should we note its effect on the vasomotor and respiratory centers. If strychnine and alcohol fail to relieve the heart, then I resort to digitalis. I do believe that digitalis increases the capacity of the heart for work. Since it slows the heart's beat, it also allows time for the heart to carry on its nutritive functions. When the digitalis fails to whip up sufficiently the flagging heart, and venous stasis goes on increasing, then I administer oxygen by inhalation. During the last stage I use the stimulating expectorants, and where resolution is delayed nothing is better than turpentine.

I shall not take up the time any longer, but I wish to say, in conclusion, that the Society is indebted to Dr. Hiram Corson for having produced this paper, and for calling renewed attention to a measure which has been too much neglected in recent years.

Dr. H. C. Wood: I should not speak to-night did I not think that there was great danger that in the lack of clear thinking we were perhaps losing lives. I do not propose to do more than to make a few comments upon what has been said by my friends Dr. Wilson and Dr. Anders. I am always afraid of rhetoric in a scientific discussion. When I hear of such things as a heart being "harassed" by digitalis, and similar expressions, I always begin to fear that the science is in inverse proportion to the rhetoric. Now, how can digitalis harass the heart? Much more, how can it exhaust the heart? You might as well talk of exhausting a starving man by a dish of broth as talk of exhausting a heart by giving digitalis. Digitalis adds power to the heart. That is an absolutely proven physiological fact. It lessens the nervous irritation of the heart, and at the same time increases the length of the diastole and the force of the systole; far from harassing the heart with digitalis, you quiet the heart that is already harassed by disease.

Then, again, we have heard that the heart is laboring with an obstruction, and, therefore, we must not give digitalis. That is the very reason why we must give digitalis. You have one-fourth of a pair of lungs obliterated—that means that one-fourth of the lumen of the vessels is shut off, so that the heart must force the normal amount of blood through three fourths of the normal space. Of course, under such circumstances, the vessels and the right side of the heart must be oppressed. The heart is weakened by starvation and disease, and it finds itself in the presence of narrowed channels. Digitalis aids us in advanced pneumonia, because there is obstruction and because the right side of the heart feels the power of the drug. We know by clinical experience the value of digitalis. Statistics are fallacious, but there is a kind of test that is not fallacious. If you take a man dying with a feeble, thready pulse, scarcely alive, and raise him up with digitalis and get the long, strong pulse, and then take away the digitalis and see him drop; give the digitalis again, and lift him up again, then let him drop again, and lift him up again, you have proof that the digitalis does control the circulation. You know that it does do good. Moreover, in advanced pneumonia, when properly used, digitalis has no power for evil. The real difficulty in its use in pneumonia is that somehow high temperature interferes with its action. When there is high temperature in pneumonia the heart muscle often will not respond to digitalis.

Now a word to my friend Dr. Anders. He spoke in regard to blood-letting and arterial sedatives, and said that you take power out of the heart by arterial sedatives, but that you did not take power out of the heart by blood-letting. Let us make an experiment: give a man daily doses of veratrum viride and keep the pulse down for twenty days, and then take a man and remove twenty ounces of blood each day for twenty days, which heart would come up the strongest at the end of this time? It is essential in the practice of medicine to distinguish between depression and exhaustion. Blood-letting exhausts a man, it takes power out of a man. It leaves the man something less than before. Does veratrum viride take any power out of a man? It lays its hand upon the heart and vasomotor centers and binds them down with strong thongs. The man is there, and when the thongs are cut, *i. e.*, the depressant removed, he rises up as strong as ever.

Dr. C. McClelland: I should like to say one word from my personal experience. Something over two years ago I had an attack of pnuemonia; both lungs were involved; the heart was depressed, dropping every third beat, and valvular murmurs were present. The mind was clear. I said to the physician in attendance: "This kind of thing cannot last more than twelve hours. Can nothing be done? How about digitalis?" He agreed to try digitalis. It was used vigorously, and in such large doses that one of my attendants remained all night to watch the effect. Inside of eight hours the beat of the pulse was strong, the intermissions had practically ceased, and the valvular murmurs had disappeared. I believe that had it not been for digitalis I should not be here to tell the story.

Dr. Judson Daland: I have been quite interested in the treatment referred to, but I think that the ordinary cases of pneumonia—as we all see them in the majority of uncomplicated cases—may go on to a satisfactory result. I have been much impressed with the fact during the last two years. In the first place, as has been said by Dr. Anders, when death occurs it is usually directly through the right heart. We have an increase in the amount of blood in the venous system and over-distention of all the veins and dilatation of the right heart, with death following from failure of the right heart. Four autopsies made during the past year showed this condition very conclusively. It seems to me very certain if we abstract blood directly from the median basilic vein we directly drain the blood from the right heart and lessen venous stasis and take off the labor from the right heart and prevent death from heart failure. This, I take it, is an important indication for blood-letting.

Furthermore, as has already been said, heart-clot is unquestionably accountable for many deaths. It has often been said that in pneumonia the blood has an increased tendency to coagulate. This fact has not been appreciated with sufficient clearness. About eight months ago I had occasion to examine the blood of several cases of pneumonia, and at the same time was examining blood from other diseases, chiefly diseases

without fever, and I was strongly impressed by the fact that in every case of pneumonia, when I attempted to examine the blood, it would coagulate in the capillary pipette with great rapidity, and it required special manipulation in order to make the examination. It seems to me that if the right heart and venous system is over-filled, a condition favoring the condition for this coagulation, I think that physical signs of dilatation of the right heart should be searched for, and that we should not wait until cyanosis develops. In two cases of pneumonia where the right side of the heart was dilated and the veins overful, the physician insisted upon waiting for cyanosis. Cyanosis did develop, and at the same moment death occurred. I think that if the physical signs can be made out, and with it are associated symptoms, venesection should be promptly performed.

DR. S. SOLIS-COHEN: I rise to call the attention of the Society to the usefulness of the nitrates in the treatment of pneumonia. Some of the remarks in discussion, especially those of Dr. Wood, might at once have suggested to those familiar with the physiological properties of the nitrites the great power that this class of drugs can and does have in the treatment of diseases like pneumonia. I am not speaking of the management of conditions directly dependent upon the specific poison of the disease, if there be such a specific poison, but of what may be done to relieve the embarrassment of the circulation from mechanical stasis due to obstruction in the lungs. Dr. Wood laid stress upon the fact that a large portion of the arterial conduit was wiped out, or better, blocked out. It seems to me an obvious inference that it would be highly desirable to increase the capacity of the remaining portion. Looking on the arterial and venous channels, pulmonic and systemic, as one continuous canal, it is theoretically clear that we must especially dilate the arterial portion in order that the whole volume of the blood may not accumulate on the venous side; and in order likewise to facilitate the passage of blood through branches of the main canal collateral to those obstructed. The nitrites—nitro glycerine, amyl nitrite, sodium nitrite—will dilate the peripheral arterioles and will dilate the capillaries, increasing the capacity for blood of the arterial side of the circulation, and thus partially compensate for that portion of the arterial channel dammed out by the blocking of the vessels in the lungs. Pulmonic vessels are dilated as well as systemic, and thus the right heart is directly relieved of labor, and the danger of over-distension in large degree diminished. Respiration is likewise relieved, especially if oxygen be given by inhalation coincidently. I have seen this remarkably illustrated, not once or twice, but more than a dozen times within the last two or three years since my attention has been more particularly directed to the subject. This measure alone will not, of course, succeed in bringing about recovery in every case of pneumonia. There are other additional ends to be aimed at by the physician, and I had been hoping to hear attention called to one of them. The increased tendency of the blood to coagulation in cases of pneumonia was dwelt upon, but the value of ammonium salts in maintaining the fluidity of the blood was not spoken of. This subject is not at all new. It was long ago brought to the attention of the profession by the same great man that introduced the nitrities, Dr. Benjamin Ward Richardson, of London. Others had, perhaps, used ammonium carbonate and ammonium chloride before him, but he it was who laid especial stress upon the danger threatening pneumonitic patients, of death from heart-clot, and for that reason urged the early and free use of preparations of ammonia to prevent heart-clot by maintaining the fluidity of the blood. He has also called attention to a useful method of administering ammonia in septic conditions associated with fibrous exudation, namely, by giving the vapor of ammoniated chloroform.

I should like to add one word in regard to the rationale of blood-letting in selected cases of pneumonia. I have seen blood-letting do good by relieving the right heart of distention, and by diminishing the quantity of blood which the enfeebled heart has to push through the much-diminished caliber of the vascular channel. There are two ways of taking a portion of its labor from the heart: one is to dilate the arterioles, thus increasing the vascular capacity and diminishing the vascular resistance—the agent used for this purpose being a nitrite—and the second is to diminish the quantity of blood which the heart is called upon to propel and the vessels to conduct. It has been said that the loss of twenty ounces of blood is a serious matter to the enfeebled patient. That depends on where the blood is, what its condition is, what it is doing. A portion of the patient is thrown out of functional relation, and a normal quantity of blood becomes relative plethora. It is of no good to the patient while it stagnates in his veins. It does not nourish him, and it does interfere with the passage of the nutrient fluid into the tissues. He is a great deal better off without these twenty ounces if he is unable to make use of them, if they contain toxic products, if they are simply blocking the lungs and veins, and finally blocking the arteries. They antagonize the heart—first the right heart, then both sides. They do no good; they are not, to use Dr. Wood's comparison, liquid food to nourish; they are liquid poison to kill, and the sooner the patient gets rid of them the better his chances for recovery.

DR. A. E. ROUSSEL: In connection with the use of digitalis, it may be interesting to note the results obtained by Professor Pétresco, reported in a recent number of the *Bulletin de Thérapeutique*. He gives an analysis of over seven hundred and fifty cases in which he used large doses of digitalis—as high as 2 drachms of the leaves in twenty-four hours—irrespective of the stage of the malady. The mortality was a trifle over 1 per cent. He claims that the pulse-beats are reduced from 120 or 130 to 28 or 30 per minute, and the temperature also seems to be favorably affected, falling four or five degrees, besides which it is said that the entire course of the disease is jugulated in so short a time as three or four days. The publication of such a large series of cases seems to require a careful study of the matter. We have all been in the habit of giving digitalis in the second and third stages of pneumonia, and this report would bear out the statement that digitalis and carbonate of ammonia are eminently satisfactory modes of treatment.

DR. ERNEST LAPLACE: I have been very much interested in the discussion, and was hoping that a few more words would be said on the etiology of the disease, so as to give some explanation as to the reason why there are sometimes sthenic cases, and at other times asthenic cases, and, therefore, why blood-letting would be indicated in certain cases and not in others. We know, as was said by the first speaker, that pneumonia is a specific disease; that it needs a special soil, and a special seed developing in it. We know that the same seed, developing in a different soil, will produce a disease, but that disease is not necessarily the same in every respect. In the same

way we plant a seed in different countries, and it will not produce exactly the same tree in each case. There are as many different soils as there are patients suffering from the disease. As a result of the growth of the peculiar organism we have produced a toxalbumin, or, if you will, ptomaine, which in the patient acts as a heart stimulant, and we have a sthenic case. In such a case gentle blood-letting will relieve the heart of the extra amount of work. It will not cure the disease, and has no tendency to alter it, but makes it less grave than when the blood has not been removed. Where the toxalbumin is not so violent, or is not so abundant, or is of a different physiological action, the heart not being over-stimulated, the disease weakens the patient, and blood-letting is not indicated. In such a case calm expectancy, with readiness to meet the symptoms as they present themselves, is the proper plan of treatment.

DR. FRANK WOODBURY: I have been much interested in the discussion, but, of course, was particularly attracted, as doubtless many others were, by the paper of Dr. Hiram Corson. The experience of a physician extending over a period of sixty-five years is certainly one that we should receive with great respect, and especially when he possesses the recognized ability as a practitioner such as that possessed by the author of the paper under discussion. While listening to the paper and the discussion, the celebrated advice of Chomel came into my mind, "to treat the patient and not the disease." We have been considering some of the dangers attending a case of pneumonia. The greatest danger to which the pneumonic patient is exposed, in my judgment, is to have a man for his physician who is so engrossed with treating the mental abstraction which he calls pneumonia, that he cannot see the concrete needs of the actual individual patient who claims his care. I entirely agree with the last speaker with regard to the desirability of confining ourselves to the use of scientific language in a discussion of scientific questions, and the dangers to which we are liable from the abuse of rhetoric when referring to medical subjects. I wish to use only words of truth and soberness, and, therefore, will not speak of the heart "putting its shoulder to the wheel" under the influence of a remedy, nor as "harassed" either by a drug or a disease. Being rather deficient in poetic insight or the imaginative faculty, I will even confess that I could never see any "indication" for remedies. The word "indication" is not in my therapeutic vocabulary. Nature never "indicates" to me a drug or a combination of drugs in any morbid state. Experience has shown that patients may be benefited by certain remedies when judiciously administered, but we are not restricted to such drugs, and we are willing to abandon them as soon as others shall be discovered which will cure more "safely, quickly and agreeably." This we could not do if Nature infallibly indicated remedies. The late Dr. J. Milner Fothergill called attention to the robust countryman at Smithfield, and compared him with the pallid clerks and artisans thronging the London streets, and very justly pointed the moral that the line of treatment in these two classes in case of disease must be entirely different. Perhaps this will explain the success of Dr. Corson in a rural community, with his practice of depletion in pneumonia, a practice which our city physicians have been obliged universally to abandon. In spite of the advocacy of the great Dr. Rush and his successors, it has almost become obsolete with us. I think that perhaps we have done as much as we should do for the present, in regard to the classification of diseases, and that we should now begin to classify our patients as the foundation of success in therapeutics. For instance, instead of dividing pneumonia into sthenic and asthenic cases, I think that it would greatly simplify the problem of treatment if we were to substitute the words plethoric and anæmic. It is easy to make a distinction between plethoric and anæmic patients. Sthenic cases are more likely to occur among the plethoric; asthenic cases among the anæmic. In plethoric cases, or even where the hyperæmia is local, blood-letting is a rational procedure, and when the symptoms are urgent and do not admit of delay, it is practised with advantage, as Dr. Corson has shown. We should not, however, bleed for the pneumonia; as has been already said, we should bleed for mechanical reasons. Where the symptoms are less urgent we may decide to depend upon arterial sedatives and dieting to accomplish the same purpose.

In regard to a typical case of pneumonia, by which I mean an ordinary acute lobar or croupous pneumonia, I might say that I do not recognize congestion as the first stage in the morbid process. Even the premonitory hyperæmia of Stokes must have something to precede it. It is certainly permissible to assume a nervous disturbance, which causes the local hyperæmia; in other words, some efficient morbid influence acting through the vasomotor nerves of the affected lung and the cardiac ganglia, and causing trophic disturbances. The view is now generally held that pneumonia is not an inflammation, but a general disease, if not a "specific fever."

In a plethoric case, or robust patient, I should commence the treatment by that old-fashioned remedy, an emetic, and preferably ipecacuanha, because it is a fact that this emetic tends to produce anæmia of the lung. There is no better arterial sedative than an emetic, and this also quickens the functions of the skin and favors diaphoresis. This I would follow by magnesia sulphate in sufficient doses to produce several watery evacuations of the bowels. In this way, we relieve the over-distention of the blood-vessels. We do not bleed the patient into his own tissues, but into his own bowels. Then I should simply give remedies to make the patient comfortable, and keep him upon a very restricted diet. If there is great restlessness, or too much cough, I would give small doses of chloral or bromide in preference to morphine. I remember a case where a patient was doing well under small doses of chloral and bromide. I was attending him during the absence from the city of another practitioner who, on returning, took charge of the case and changed the treatment to Dover's powder, with the result that in the course of a couple of days the patient died. I think that many deaths in pneumonia are really due to opiates, and, in the beginning, they are inadmissible, just as in the early stages of bronchitis.

An anæmic case of pneumonia I should treat entirely different. Here I should give restoratives and broths, and depend upon nursing more than upon medicines. I would give digitalis and quinine, and perhaps iron, but in such cases supporting the strength of the patient is far more important than any special drug, and bleeding is not to be considered.

As we know that a large majority of the cases of pneumonia get well under any and every form of treatment, we are tempted to echo the advice of Chambers with regard to rheumatism, "to cover up the patient with blankets and leave him alone," which, in fact, is about what Jürgensen advises in pneumonia. Unless we have certain symptoms that give annoyance, pain, or suffering, I think that the vigilant expectant treatment advocated by Dr. J. C.

Wilson in opening this discussion, not too actively interfering with the course of the disease, will give the best results in the greatest number of cases. Where the emergency arises and the patient is suffering from acute plethora, or distention of the right heart, or overwhelming congestion of the lung, I should bleed just as if the patient did not have the pneumonia, but I would never bleed for pneumonia. The routine practice of venesection in this disease has never recovered from the death-blow it received at the hands of J. Hughes Bennett. At the same time, I can understand that the emergency may sometimes arise when the abstraction of a certain amount of blood will afford great immediate relief to the patient, without being followed by any serious consequences as regards the subsequent course of the disease.

DR. JOHN B. ROBERTS: It may seem presumptuous for me, who see comparatively few medical cases, to speak on this subject. I have, however, bled in a few cases of pneumonia. I now recall four cases, of which three recovered and one died. It is, however, not fair to the Society, nor to statistics to quote these cases together. They are divided into two distinct classes. The first class contains cases of traumatic pneumonia, which I see in surgical practice. They are usually of the sthenic character, and in them at times the engorgement of the lungs, from acute traumatic pneumonia, demands depletion. The second class of cases in which I am inclined to bleed are cases similar to those spoken of by Dr. Anders, in which, in addition to a pneumonia, there is overwhelming of both lungs with what might be called œdema of the lungs. These are cases in which the presence of moist râles indicate that the smaller bronchial tubes, and possibly the vesicles where they are not filled with the croupous deposit, are filled with mucous or serous fluid, thus preventing respiration. The patient is cyanosed, gasping for breath, and *in articulo mortis*. These cases should be bled. I have bled two of them and one has recovered. The other two cases of my four already mentioned, were instances of traumatic pneumonia in which I think that there is no question that a moderate bleeding of from eight to ten ounces or less (I have never removed many ounces) was of service. One was a case of gunshot wound of the lung followed in about twenty-four hours with violent dyspnœa, orthopnœa, and all the symptoms of acute pneumonia. I at once bled and he was relieved, the symptoms disappeared, and he rapidly recovered, notwithstanding the fact that he had a bullet in the chest. The second case was that of a man who had been run over by a wagon, had several ribs broken, a pneumonia following from punctured wound of the lungs by the ribs. He was bled, with a satisfactory result. Of course, we must separate these cases into two groups —those of traumatic sthenic pneumonia, and those in which there is overwhelming of the lung and the patient threatened with drowning in his own secretions. In the latter case the abstraction of blood gives the lungs an opportunity to be relieved, lessens the engorgement of the right heart, and permits respiration to be properly carried on.

DR. GEOREE N. HIGHLEY: I have listened with a great deal of pleasure to the remarks that have been made, and I feel very thankful for the favorable comments which this paper has elicited. With regard to pneumonia being a general disease, we differ from the many eminent men who hold that view. We do not think that this has been proven. Because it is accompanied by certain constitutional disturbances, is no reason for regarding it as a specific disease. We know that local troubles, when similarly situated pursue like courses, and when extensive are accompanied by constitutional symptoms in proportion to their extent and gravity. But whether we regard pneumonia as a local disease or as a local manifestation of a general disease, we must agree that the condition present demands relief by measures which will unload the lung and the right side of the heart, and we think that venesection does this with the greatest amount of relief and the least amount of depression. A word in regard to bleeding in the so-called asthenic cases. Out in Conshohocken we do not see such cases. We regard the condition as precisely the same in all our patients, whether robust or weak, or run down by disease. I know of one case, a woman with an ovarian tumor weighing sixty pounds, for which she had been refused operation. She was taken with phneumonia, and her physician attended her for a few days; the disease had progressed to the second, and perhaps to the beginning of the third stage. Dr. Corson was called in consultation, and advised venesection, which her attending physician had hesitated to perform on account of her great weakness. Twelve ounces of blood were removed with relief of the symptoms, and from that time she did not expectorate any more of the rusty colored sputa. That was a remarkable case and I could give full notes if there were time. I refer you also to the case of Dr. Michener (*Med. and Surg. Rep.*, July, 1882), who, at the advanced age of eighty-seven years, and while suffering from a fracture of the arm, was attacked with pneumonia. He directed the attending doctor to "bleed until the pulse gives way and the respirations become easy without regard to what may be in the basin." This was done and relief soon followed. The amount taken was ℥xv.

About bleeding in the third stage. Dr. Corson's idea is that there is always some stage of congestion in part of the lung. If you could conclusively show that the area first affected did not extend with each succeeding day, and that the parts involved simply went through the several stages without further extension, then it would be true that venesection would be harmful after the first or second stage. We think, however, that in every case and in every stage of the disease, until the crisis has been passed, new portions of the lungs are continually being involved, and for these new areas of congestion and inflammation bloood-letting is of value.

WOUNDS AND DISEASES, INVOLVING BOTH ABDOMEN AND THORAX.[1]

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THE important relations of the viscera lying above and below the diaphragm in their normal state, assume a much greater significance when they become disturbed by wounds, or by pathological conditions.

Certain parts of the vital organism belong exclusively to the thoracic or to the abdominal region, while other structures extend through the partition, so as to occupy both of these divisions. To the latter class belong the aorta, the vena cava, the great sympathetic nerve, the lymphatic system, and their respective ramifications. The alimentary mechanism

[1] Abridgment of paper presented by invitation to Alabama State Medical Association during its session in Montgomery, April 12–15, 1892.

is intimately connected with both compartments, while all the elaborating processes are carried on in the lower division All the movements and sensations of the body depend upon the supply of nerve power by the medulla spinalis, which, included in its bony casing, sends out its lines of communication, as it descends on the posterior portion of the thorax and the abdomen. With these vascular, lymphatic, and nervous communications between the organs included in the upper and lower cavities of the body, we are prepared to understand how the troubles of each may be propagated to the other. While the principle of sympathy between the different structures is a recognized pathological condition, it is explained on the same basis of effects, which characterizes reflex disturbances, and must be accounted for through the interlacing of the nerve filaments.

The ordinary sequence of a local disorder, whether traumatic or idiopathic, is not generally distributed to all the surrounding structures, but in certain directions and by fixed channels, to a definite class of tissues under the influence of pathological laws.

The revolution is notable through which thoracic and abdominal surgery has passed in the last quarter of a century. The favorable results of thoracotomy and laparotomy, demonstrate a recuperative power on the part of the pleura and peritoneum, which is well illustrated by a case of extensive wound, reported by Brokaw, of St. Louis.

A typical case of thoraco-abdominal wound occurred under my observation in the early part of 1891, in the person of a young negro man. While engaged in a fight, he was stabbed in the left side, the blade of the knife entering above the tenth rib, on a line descending perpendicularly from the nipple. It passed inward and downward through the pleural cavity, penetrating the diaphragm, and invaded the abdominal cavity. When I was called to him at the Providence Infirmary some hours after the injury was received, it was ascertained that he had vomited repeatedly from the effects of beer which he had been drinking. He lay in a semi-conscious state when left alone, but became agitated and violent when disturbed, and was therefore given a hypodermic of morphine, gr. $\frac{1}{4}$; atropine, gr. $\frac{1}{150}$, to secure composure for the surgical procedure.

Upon examination, I found a hernial protrusion of the omentum, about the size of a hen's egg, outside of the cutaneous opening. Pressing steadily with my fingers around and above this mass, it was gradually carried back through the external wound.

The most rational explanation of this double hernia escaping from the abdomen into the thorax, and thence externally, is that the openings made by the knife through the wall of the thorax and the diaphragm were brought together by the impulse of the contents of the abdomen against the diaphragm carrying it upward and outward. With the incisions in contact, it was an easy matter for the omentum to pass out through both, just as a stud is passed through two button-holes of a shirt sleeve when approximated. The bulging out and enlargement of the part beyond the skin, served to keep the protrusion fixed *in situ*, just as the head of a stud holds it in position with the button-holes.

That so large a segment of the omentum should have been strangulated and exposed for such a length of time without inducing peritonitis, or other serious results, is only an additional proof that the peritoneum can undergo more rough treatment than was formerly supposed without being followed by inflammation.

The most important class of injuries to the abdominal and thoracic viscera, are those inflicted by firearms. The medico-legal aspect of gunshot wounds arrests attention especially, and the difficulty of determining upon the course of a ball in either of these cavities, when there is only a point of entrance brought under the observation of the surgeon, is generally recognized.

The practical bearing of a case, which was examined in conjunction with several colleagues, warrants a report of the facts presented at the outset and subsequently.

The patient received a pistol shot in the epigastric region, and no clue was obtained as to the course of the ball until two days afterwards, when soreness directed attention to the right side of the chest. Upon palpation the ball was found lodged between the seventh and eighth ribs, and hence must have passed diagonally inward and upward. It must have traversed the liver and the lower part of the pleural cavity, with perhaps injury of the lung. There was a marked tendency to collapse about twenty-four hours after the injury was received, which was attributed to hemorrhage into the right pleura. He rallied under the use of stimulants hypodermically applied, but died at the close of three days, and no post-mortem examination was made.

An instructive case of gunshot wound penetrating the upper portion of the chest on the right side, and passing downward diagonally across to the left side of the abdomen, came under my observation a few years ago in this city. I saw this patient in consultation about a month after the injury was received, and then diagnosed empyema of the right pleural cavity, with the recommendation of an operation. But, on the following day, another colleague, with a good surgical standing in the profession, joined in the consultation, and gave an opinion in favor of waiting for further developments. My conviction was unchanged in regard to the urgency for evacuating the collection, but the attendant acquiesced in adopting the course of masterly inactivity in the case, and the patient succumbed in less than a week afterwards.

Being invited to participate in the post-mortem examination, it was verified that the right pleural cavity was filled with pus to such an extent as to push the mediastinum beyond the median line, and to cause a depression of the diaphragm. The ball had traversed the liver, and was found encysted in the omentum, with but slight indications of inflammation in the peritoneum or other abdominal viscera.

A counterpart of this last case has come under my observation recently, in a gunshot wound entering the left side of the chest and ranging diagonally backward into the abdomen:

This was a white man, A. C., 33 years old, who was shot with a Smith & Wesson pistol of 38-calibre by a man at his left side. I saw him about fifteen minutes after the shooting, and found that the ball had passed through a thick coat, vest, shirt, and undershirt, penetrating the chest-wall between the sixth and seventh ribs on a line with the anterior axillary fold, and about an inch below a transverse line from the left nipple. It was out of my power to determine precisely what course the ball had taken, and upon a careful examination of the opposite side of the thorax by palpation, the presence of the ball could not be detected.

The patient labored under the influence of shock to a limited extent, with a weak and frequent pulse; but there was no hemoptysis or dullness upon percussion over the left side, and the respiratory murmur was very evident upon auscultation over the front of the

left lung. It was hence inferred that the ball had not penetrated the lung. About twenty minutes after the accident, a hypodermic injection of morphine, gr. ¼; atropia, gr. $\frac{1}{100}$, was used and repeated in half an hour.

Upon learning, two hours afterward, that he had vomited blood, a combination of ergot, digitalis, and elixir of opium was given. Realizing that the stomach was perforated, I suggested next morning a laparotomy, but my colleague thought it best to leave the case to nature, and the patient was left in his charge.

As this kind of surgical conservatism was not calculated to avail for the relief of perforation of the stomach, it was not a matter of surprise that the case terminated fatally at the end of the third day from the receipt of the injury.

An autopsy, made by the county physician, Dr. E. Griffin, under the direction of the Coroner, revealed that the ball had passed through the thoracic wall, traversing the lower portion of the left pleural cavity just beneath the pericardium, thence perforating the diaphragm and the walls of the stomach with those of the transverse colon. The conical ball was found lodged in the muscular tissues on the left side of the vertebral column, nearly opposite the seventh dorsal vertebra. There was but little blood in the pleura, but much in the peritoneum.

When the anatomy of all the parts involved is recognized, it will be understood that the ball passed nearly at a right angle with the axis of the body, and came from a pistol held on a line with the external wound by a person occupying a position obliquely on the left of the victim, as described by an eye-witness.

The matter of practical moment in this case is the probable outcome of a laparotomy after the wound of the stomach was recognized by the vomiting of blood. In view of the fact revealed by the autopsy, that the colon and stomach were perforated, and that no other serious wounds existed, it appears that closing the openings might have averted death.

An interesting case, in which an injury over the sternum extended to the abdomen, has been treated in consultation, in the person of a vigorous white man, with a fatal result:

A contused wound, without laceration of the skin or fracture of the bone, caused considerable pain in the chest at the outset, followed by febrile disturbance, and was ultimately complicated with cramp of the bowels and distension of the abdomen. There was marked thirst, and vomiting from taking large quantities of fluids into the stomach. The intestinal torpor only yielded to frequent doses of calomel, followed by castor oil and spirits of turpentine.

While there were indications of traumatic pneumonia, as a direct result of the injury, the transmission of the inflammatory process to the abdominal viscera induced peritonitis of a grave character. So far as could be learned from the history of the contusion, there was no violence immediately to the walls of the abdomen, and hence it was inferred that by a metastatic process inflammation was propagated to the peritoneum.

Notwithstanding the employment of vigorous measures to combat the thoraco-abdominal complication, it ended fatally in the course of a week.

In illustration of the effects of pathological conditions, implicating the abdomen and thorax, I recall an interesting case connected with gall-stones, which was under my care some years ago:

After long-continued hepatic derangement, with the evacuation of gall-stones by the bowels from time to time, there eventually developed a pulmonary disorder with a very peculiar expectoration. It did not present the characteristic appearance of mucus or pus, but had a grumous and sanious character, with a most offensive odor, such as never has been encountered in any other case. This very remarkable stench permeated the apartments, so as to make it extremely unpleasant to remain in any part of the house, and there was a constant renewal of it from frequent expectoration of the dark brown matter by coughing. The patient had been for several weeks in a very feeble condition, and only survived this pulmonary complication a few days.

An autopsy revealed several very interesting pathological complications.

An ulcerated communication between the abdomen and the thorax was the feature of the case bearing most directly upon the subject of this paper, and under peculiar conditions.

The difficulties attending a correct understanding of the complications, growing out of thoraco-abdominal wounds and diseases, are such as to demand full investigation of this class of cases by the profession.

The anatomical relations of the thoracic and abdominal viscera, separated by the crucero-convex muscular partition of the diaphragm, render a diagnosis of complex injuries highly important.

I have ventured upon this comparatively unexplored field of observation with the hope of arousing an interest in this branch of surgery; and I trust that the points presented may elicit profitable discussion from those who may have experience in treating these complications.

A CASE OF DOUBLE TUBO OVARIOTOMY—RECOVERY.

By THOS. W. MUSGROVE, M.D.,
PUYALLUP, WASH.

MRS. B., aged thirty-nine; married fifteen years; the mother of two children; one thirteen years old; the other would be eleven, but died in infancy. Has had pain, lameness, and swelling in right ovarian region and right leg, more or less, since the birth of her last child, eleven years ago. Her menses were irregular and painful. She attended to her domestic duties most of the time, but gradually became nervous and less able to bear fatigue. About October of 1891, she passed her menstrual period longer than usual, and thought she might be pregnant, as her general health had been better for some months before; and when she began flowing, about November 1, she feared a miscarriage, but, as she was not very sick, she did not send for a physician for some days. The physician could not be sure that she had miscarried, but thought it probable. The discharges might have been simply clots. But, in spite of treatment, she got worse, and was soon unable to leave her bed. Pain and copious discharge of thick, stringy pus from the uterus kept her in bed, and reduced her much in flesh and strength.

Such was her condition when she fell into my hands on January 6, 1892.

A thorough examination enabled me to make a pretty positive diagnosis of chronic ovaritis and pyosalpin of the right side, with adhesions of the ovary and tube to the pelvic wall. The left ovary was also tender and swollen. The uterus was somewhat movable, and about normal in size, slightly enlarged. The uterine cavity was filled with thick, stringy pus, that came away in masses, which at times produced uterine colic of a very severe character. The swell-

ing in the ovarian region would wax and wane as the pus was discharged or retained. Her general condition was good, except slight symptoms of sepsis at times.

I undertook to thoroughly cleanse the uterus. I had no difficulty to reach the fundus with a sound, and the internal os was easily dilated with a large sound. I then disinfected the uterine cavity thoroughly with bichloride of mercury solution; then injected it full of H_2O_2 of full strength—Marchand's—until it returned clear of bubbles; then used iodoform suppositories. She improved for about two weeks, then, as she was turning in bed one evening, she felt something give way in the region of the right ovary, only a little higher up, and instantly an intense pain set in, and she became cold and pulseless—in short, collapse set in, and she and her friends thought she was dying. As soon as I could be found, which was in less than an hour, I visited her and found her very weak, cold, and almost pulseless at the wrist. As soon as the pain could be relieved by opiates, she began to rally, and in a few days was about the same as before the attack of circumscribed peritonitis, which it proved to be, but which looked like the rupture of an abscess into the peritoneal cavity. I treated her through February, but could not stop the pus from forming in the uterus or tube, and advised a laparotomy for the removal of the ovaries and tubes, which was agreed to.

I had her removed to the Fanny Paddock Hospital, in Tacoma, as a private patient, and on the 9th of March removed both ovaries and both Fallopian tubes, assisted by Dr. H. P. Tuttle, one of the visiting surgeons of the hospital. I found the right ovary and tube strongly adherent to the pelvic wall, and the tube and ovary matted together. The ovary was enlarged and the most of the center filled with cysts—one filled with a jelly-like substance. The tube was many times larger than normal, but had no pus in it. There was no pus found in or about the ovary. The left ovary and tube were nearly normal, but there was an ovarian cyst as large as a marble in the ovary, and looked as if there would have been a well developed ovarian tumor in time.

The adhesions of the right ovary were difficult to break up, and the exudation of blood and serum was so great that I put in a large glass drainage tube, and closed the peritoneum and linea alba with catgut sutures, in the usual way, and used silver wire for closing the wound. The whole operation was done under the strictest antiseptic and aseptic conditions possible. The spray was not used, except to cleanse the operating-room. Iodoform cotton and gauze were used to dress the wound.

She stood the operation well. The A. C. E. mixture was used at first, for half an hour; then Squibb's ether for the remaining thirty-five minutes. I followed Tait's method as nearly as I could, using the Staffordshire knot.

She recovered from the anæsthetic easily, and had no vomiting; but pain in the region of the right ovary was so severe for two days as to require ½ a grain of morphine, hypodermically, every night.

Her temperature never rose above 101°, and her pulse scarcely ever reached 100.

At the end of eighty hours I removed the drainage-tube, and closed the opening with a silver wire, that had been passed but not tied.

She went on well, except considerable pain, until the ninth day, when, on removing a wire suture, I found an abscess, deep in the right rectus muscle, which was well washed out with H_2O_2, and gave her much relief. It healed up in less than a week, and she went on to recovery with nothing to trouble her but a return of uterine colic, with a discharge of pus from the uterus at the time her menses would have appeared had she been regular, but no menstrual blood came. She had a very slight flow on the second and third day after the operation.

She was able to leave the hospital and go home, nine miles, in four weeks and three days after the operation. She had not walked for five months, but now, just forty-seven days since the operation, she can go about her house and garden easily. There is a little pus occasionally, and some soreness in the womb, but she eats first rate and is getting fleshy. Her nervousness is disappearing and she is sleeping well.

My diagnosis was practically correct, but not technically. There is evidently a pus cavity in the uterus, probably in the right corner, where there seems to be a cavity in the proximal end of the tube.

As the dictum of the authorities at present is opposed to the general practitioner doing such operations, I wish to say a few words in defense of my conduct in this instance.

Out here in Washington, where our towns are less than ten years old, and our hospitals, as a rule, much younger, there are no specialists in laparotomy. A few cases have been operated upon, but not under very favorable circumstances, yet most of them have recovered. There are no surgeons nearer than San Francisco any better equipped to do a laparotomy than we are here in the cities of Washington; consequently, while we are growing into great metropolitan communities, the general practitioner must do all kinds of work, and all kinds of operations necessary are being done by the men who are here, and successfully, too. But one thing is not done, to any extent, at least, that is unnecessary and useless operations from the patient's standpoint, as it is alleged by some that enthusiastic specialists do. In this case I and my colleague agreed that both ovaries and tubes should be removed, in order to hasten the menopause and relieve the patient as soon as possible of the nervous irritation that each menstrual period produced.

In conclusion, I wish to state that there have been three laparotomies done in this vicinity, this winter, by three different general practitioners, and all have recovered.

My conviction is that any well-educated surgeon who is abreast of the times, and has had a large general practice for some years, ought not to send his patients hundreds of miles, at great expense and some risk from the journey, to a specialist for a laparotomy, when, with proper care and attention, he can do it himself, with as good a chance of recovery, at the patient's home or in some small hospital near-by.

A MAN entered Dr. H. B. Kaufmann's office at 271 Clark St., Chicago, May 3, and asked the physician to come with him to his home, where a young woman was ill. Dr. Kaufmann hurriedly threw on his overcoat, and stooped to pick up his medicine case. When he arose he looked into the barrel of a revolver.

"You have a roll of bills in your pocket and I want them all," said the man, at the same time threatening to shoot. The latter was compelled to give up his pocketbook containing $76, and the thief disappeared.

A CONSIDERATION OF ACTINOMYCOSIS, AS TO ITS NATURE AND RELATION TO THE PUBLIC HEALTH.

By FRANK S. BILLINGS,

Director of the Patho-Biological Laboratory of the State University of Nebraska.

AS should be well known to every cattle breeder in the West, and every farmer who feeds cattle, and who of them does not in a more or less extensive manner, the Live Stock Commission of the State of Illinois began a senseless war upon the cattle breeding and feeding interests of the West by the wholesale condemnation of all cattle affected not only with "lumps" on the jaws, but lumps of almost any kind, large or small, that are visible in the tissues around the jaws, on the general assumption that these "lumps" are caused by a micro-organism—a germ—known to the medical profession as actinomyces. The ground of this wholesale condemnation was that actinomycosis is a "dangerously contagious disease," and the only reason the Illinois Live Stock Commission has for making such an assertion is, and has been, to use their own words, that "the fungus, actinomyces could be transmitted from one animal to another by inoculation, which fact establishes it as a contagious disease."

Another assertion, with which in fact and law this Commission has nothing to do, is that the fungus produces a condition of the flesh of the afflicted animals which renders it extremely dangerous as an article of human food, which makes the question at issue of equal importance to the medical profession as one touching intimately the public health.

Were lump jaw a "dangerous contagious disease" the Commission has certainly the power to act in the premises, but, as will be shown, it has contradicted that assertion by never acting or treating the disease as if it were "dangerously contagious," and, in fact, in the late trial at Peoria, its expert witnesses entirely gave up that point, hence, actually admitted that they were and had been going entirely beyond the authority given them by the law for the suppression of "dangerous contagious" diseases. As to the relation of the flesh of animals afflicted with "lump jaw" as an article of human food, that belongs to the Boards of Health and not the Live Stock Commission, and the sale of such meat is a matter for a criminal court to consider and not a civil one.

As is well known the so-called "Whiskey Trust," for whom the Illinois Live Stock Commission had condemned a very large number of cattle on account of "lump jaws," recently entered suit against that body in a civil court at Peoria, Ill., the writer being the one so-called "expert" to represent the Trust and the cattle breeding and feeding interests of the country, though others were also there in such capacity. The following letter from the attorneys of the Trust will give the public a suitable idea of the verdict rendered:

PEORIA, ILL., Nov. 26, 1891.

Dr. F. S. Billings, Lincoln, Nebraska.

DEAR SIR:—Our jury in the cattle case was discharged yesterday. It went out Monday evening, and remained out until yesterday forenoon, when they announced a failure to agree, and were discharged. This will necessitate another trial. When they went out they stood seven to four, seven for plaintiff. Day before yesterday three of the four agreed with the seven upon a verdict in favor of the plaintiff, the only difference being the amount of damage. One man, a little druggist, hung the jury. The effect of the trial seemed to be largely in our favor.

Yours truly,
STEVENS & HORTON.

THE IMPORTANCE OF THIS CASE TO THE CATTLE BREEDERS AND FEEDERS, AS WELL AS THE CONSUMERS OF THE COUNTRY.

There is not a single breeder or feeder of cattle in the Western States, or a consumer of meat that does not belong to the wealthy classes, who should not have a direct and personal interest in the final results of this case which, though not with that intent, has been really taken up in their interest by the so-called "Whiskey Trust." That this is in a measure the case was fully demonstrated during the late trial by the numerous telegrams and letters received from farmers and breeders by both Mr. J. B. Greenhut of the Trust, and myself. The interest should be universal, however. It is not the limited number of cattle fed at the distilleries which are threatened. It is the entire cattle business of the great breeding and grazing States of the West, and the great army of consumers in the country whom everything tending to unnecessarily offset the food supply most directly influences. It is not the "lump jawed" cattle of the great feeders any more than the one or two such of the ordinary farmer that are in danger of confiscation by the tanking organization in Chicago. There is far more "lump jaw" among the cattle of the West than any single owner has any realization of, because few, if any of them, have taken any pains to acquaint themselves with the actual condition. A very conservative estimate would be to say that one out of every five hundred head has this trouble to a more or less marked degree. I, myself, would say that there was at least one in every two hundred and fifty. Cattle men must, or should, be aware that the term "lump jaw" by no means means "lump jaw" in the minds and eyes of the Illinois confiscating officials. To them almost any kind of lump, if no bigger than a marble anywhere around the jaws, or between them, or along the neck, gives a sufficient warrant for the confiscation of the entire carcass and the supposed condemnation to the rendering tank. Whether all such animals really get there would seem to be a very doubtful question from testimony given at Peoria. The confiscation has been painfully evident to many a breeder by the depleted condition of his pocket book. While to very large feeders the confiscation of two or three head of fine fat cattle in a large number sent to Chicago is not, or may not be, a very serious matter, it is undoubtedly so to the small feeder who takes in a car load or so, and it is these small feeders' losses which help to swell the aggregate loss by this senseless confiscation to a very large sum. But that is not all the loss. The fact that cattle with almost any kind of a lump, whether on the jaw or not, whether open and running or not, will be ruthlessly confiscated in Chicago has become pretty well known all over the West, and such cattle are now being used for home consumption at the cheaper prices of the grazing States, the owner thereby losing the profits of his feeding, the interest on the money invested, as well as valuable time. It matters not how fine the condition of the animal may otherwise be, were it the crack steer of the yard, "to the tank" it must go by order of the great Illinois confiscatory. It is thus easy to be seen that the loss to the breeders and feeders is vastly more than is represented by the number of cattle confiscated at the stock yards of Chicago.

But that is not all by any means! There is still another side to this question of equal importance. For political reasons only, though successfully pulling the wool over the eyes of the majority of the farmers of the West, the present Secretary of Agriculture

is making a great ado as to what he has done and is doing towards opening the markets of Europe to our live stock products. He does not, however, tell us of the real influences that have been at work, and still are, and will continue to work in Europe in our favor. This year it is short crops and scarcity of food which are playing the chief *rôle*. The people are begging for bread and the Governments have been obliged to roll away their infernal obstructing stones somewhat from the doors. But a mightier power than the pompous Secretary of Agriculture of the United States, the Republican party, the Government of this or any other country, has its hands on these barrier stones which, like barbarian sentinels, have set nation against nation, man against man, and brother against brother in the form of those infernal and damnable creations of individualistic selfishness, protective tariffs. This power is the wave-like and almost universal uprising of common every-day humanity in every land, that great movement under many names known as Socialism. It is the people who are opening the doors to our products. William II, of Germany, has shown that he hears and appreciates this demand better than any other European monarch or government, and it is to him, more than Secretary Rush, that the freer entrance of American meat products has been permitted in Germany. It is the shaking of thrones of Europe, listening to that distant rumbling of the mighty voice, that is rolling away the stones from the portal of the grave in which human rights have been buried so many years. Socialism says "give us cheap bread and cheap meat or your days shall be numbered in the land." Socialism means mass-justice, rights and right to all, not communism or any such half-way theoretic affair. Socialism means inter-nationalism, not individualistic nationalism. It means the world and its products for humanity, not for Jew or Gentile, American or European. It means universal and free communion between all nations and all people, and the greatest possible distribution of their productions so that each and all may equally share in the benefits of mutual production. It is this on-rushing and certain to be overwhelmingly victorious power that is being wafted by the free winds of heaven, from nation to nation and people to people, that is to bless our farmers, and not the great apostle of that savagery distinguished by the name of "reciprocity" now sitting on the Agricultural throne in Washington. It is that two-edged sword forged anew by the present administration, called "reciprocity," that still keeps the stone practically before the portals of continental nations, and prevents the free ingress of our agricultural products to their people.

"Reciprocity," what does that mean? It means "you hit me and I'll whack you," just as much as it means "you give me sugar and I'll give you pork." Thus far, there has been more bitter brine in the reciprocity act than sugar for the live stock men of the West. The bolt with which the "reciprocity" bow has been armed by continental governments, and with which they have hit our live stock interests in their vital parts, has been pointed at Washington, and tempered with accursed refinement by other public officials in various parts of the country. On its feathered and jagged barb is stamped the words "disease in American stock." At Washington they sharpen it with pleuro-pneumonia which they nurse and nourish in and around New Jersey and New York, and dare not stamp out, as a lash to hold over Congress in order to squeeze out those appropriations by which suckers on the Government sugar bag live. In the West, the edge received a finer temper by the mistaken assertion that the contagious foot and mouth disease existed in Missouri. The final grinding, tempering and preparing of the two-edged barb, "reciprocity," has been given, however, by that band of confiscators, the Illinois Live Stock Commission, when it asserted the prevalence of another "dangerously contagious disease" among our cattle by the name of "lump jaw" actinomycosis.

Verily, the breeder, and feeders of cattle in the West, the great laboring classes of America, can cry out in their anguish, "Lord, deliver us from our friends!" Enemies would be the more appropriate word. Thus far the benefits which the live stock growers of the country have received from the various Veterinary Sanitary Organizations, created for them by their legislators, have been so microscopic in character that it would be exceedingly difficult for even the investigators of the Bureau of Animal Industry to discover the microbe thereof.

The preventive microbe can be easily named, though from present indications it may be years before it is under an active stage of cultivation. It is known, or will be, as fanatical honesty, supported by great intelligence on the part of the public officials. While the necessities of the strictly continenal people, and the respect their governments are beginning to have for the great socialistic uprising, have opened their markets to our pork and to some extent cattle products and grains, the "reciprocity" boomerang still comes back to us from Britain bearing with it the fell cry of "disease." From that country the shaft hits at our beef productions more than from any other. There is not a word of honesty in it. That is known as well to the Britishers as ourselves. But it is "reciprocity," "don't you know?" McKinley and his brother robbers (of the people) have hit the Englishman under the rib in every vulnerable point, and we all know its the nature of doughty John Bull to reciprocate to the best of his ability in relation to all favors of that kind. He cannot strike us on bread stuffs, for that would be a boomerang too dangerous to use even for that powerful government. He cannot strike us very hard on manufactures either, for similar reasons. But he can hit our live stock interests, and he does it with a vengeance, utterly regardless of the truth. John Bull does not like meats from "diseased" animals any more than other people, and take him all in all he is a very sensitive personage with regard to his beef—when it comes from the United States, especially when the Sanitary Live Stock Organizations of this country insist upon telling him day in and day out in our public prints, that we have such terribly "dangerous contagious" diseases as "lump jaw" in the West, the contagious lung plague in the East and foot and mouth diseases in Missouri, scarcely a word of which is true.

That "lump jaw" is neither a contagious nor infectious disease will be completely demonstrated in these papers, as that the fluids from such cattle is generally as fit for human consumption as any other animal product.

It is necessary that we come to a clear understanding of what is meant by diseases being contagious or infectious. The discussion will naturally be considerably of a grind, and must necessarily be of both a scientific and practical character. It is absolutely essential, however, that the live stock men of this country, as well as the medical profession and lay public, should have a most definite and positive idea on this matter, and that, so far as possible, it should be settled once for all. This I shall do for every man of good, sound, practical, common sense. In fact, I

dare make this assertion, that the practical, every-day, intelligent and thinking citizen has clearer, more logical and more correct ideas of the meaning of the word contagious than the majority of the medical profession. Once, some forty years ago, before the birth of modern experimental medicine, especially the bacteriological craze, medical men also had some common sense, and knew the meaning of the word "contagious," but to day it seems to have no definite meaning whatsoever, that is even more true of the great investigators than of the rank and file of the profession, though the latter have been pretty generally led astray through the erroneous teaching and influence of this modern school of experimental medicine, the workers in which

> "Know the right,
> But still the wrong pursue."

It is undeniably true that of all the so-called scientific profesions, which have their appropriate and absolutely essential *termini technici*, that the members of the medical have the least knowledge of their true and logical meaning of any. I will go so far as to assert that the average graduate and many of the so-called "professors" in our medical colleges, editors and writers in our medical journals, do not use rightly, or even know the correct use of, a vast number of the strictly technical words common in pathology. I know full well the correctness of this assertion. Such ignorance would be disgraceful in even the veriest "sheister" member of the bar. He could not enter a case in any court in America. How often have I heard that great master of pathology, Virchow, most terribly denounce this very ignorance, while listening to his lectures for several years in Berlin, and more especially in many hours of private intercourse. It was from the master that I, myself, received not only the inspiration, but the instruction, which has made me, like him, somewhat of a dogmatist on this question. English and American medicine are both notoriously loose in this regard, and it is this very looseness of thought and expression which has given the Illinois Live Stock Commission its grounds for the utterly baseless assertion that "lump-jaw is a dangerous contagious disease." The real fact is, that every member of that commission, every veterinarian who certified on their side at the late trial at Peoria, not only knows that actinomycosis is not a contagious disease, but absolutely gave testimony in support of that fact. One of their chief experts, whom to avoid personality I will not call by name, when discussing this very question with me, said: "I have put myself on record in that way (meaning in the official report of the commission) and must stand by it to be consistent." Which in common every-day language means, he had knowingly lied in one place and must keep on lying so as not to lose his job. As hygienists, that is, members of any official body having "Sanitary Veterinary Police authority," the veterinarians of the Illinois Live Stock Commission know full well that lump-jaw is not a "contagious disease" in any sense of the term. Practically, they not only know it, but their every action in connection with lump-jawed cattle is positive evidence that they never did, and do not now consider it to be a contagious disease.

Now let us see what we mean by a contagious disease.

The classification of disease of certain types as either contagious or infectious is very old, and antedates by some centuries the birth of modern scientific medicine. It was a purely practical differentiation based entirely upon daily observation and years of experience with the great pest which overran Europe in the centuries previous to the present, and upon the result of those observations and experiences comes this classification, which is entirely hygienic in its characters, and expressed and still expresses the basis upon which all preventive measures in reference to contagious diseases should and must be put into execution. This hygienic practical division of diseases was not founded upon studies made in laboratories at a distance from diseased or better affected centers, and with very little regard for the daily, practical course of such disease among the people, or in stables and in fields as we say of animals, as is now too much the case (in fact it would seem as if this side of the picture, and the experience of the ages was almost neglected at present by so-called scientific investigators), but which was the only way diseases were studied, or could be, in these early days; hence, the observations of the physicians of the sixteenth, seventeenth, and eighteenth centuries on the real character of diseases, of their true nature, were often more exact and their conclusions more reliable than those of the men of to-day, whose intellects seem to be clouded by the mere results of laboratory investigations, which, in themselves, do not necessarily teach a single thing about the chief character of a disease from a hygienic point of view.

The words contagious and infectious were originally, and in all intelligent hygienic bodies are still, used to express the primary origin of given diseases. They indicate as plainly to day, as they once did, the sources from which we may expect danger to the health of the community or our stock. The word contagious is from two Latin words, one of which means "with" and the other "to touch," in other words, to come in contact with a given something.

What is that something?

A living individual, let it be human or animal, in which a certain disease originated exists.

The old, as well as the modern hygienists, said and say, that in order that a contagious disease shall not gain admission to the country, or transportation from an infected center over the country, their efforts and observations must be entirely directed to individuals, or the possibility thereof, having such contagious diseases gaining entrance to the country. In other words, the word "contagious" is a genetic one; it points to the primary origin of the disease; it expresses the fact that to diseased, or in diseased individuals, we must look for the generation of a disease of this type, and all hygienic measures adjusted to isolating such individuals in such a manner that healthy ones cannot possibly come or get in contact with them. That is, contagious diseases do not develop de novo, and so far as we have any historical record of their nature and course, have their primary origin in animal life only, be it in man or beast. Every stockman knows that. Every intelligent citizen knows it far better it seems than the medical profession of to-day, if one is to judge from the manner in which the word contagious is used in the writings and utterances of physicians. This Illinois Live Stock Commission knows it too, just as well as it knows that they speak falsely when they assert actinomycosis to be a "dangerous contagious disease."

A contagious disease, then, is one which finds its only and primary origin in the previous disease of some individual of some susceptible species, and never, primarily, in any other way. In this manner such diseases have been kept in existence, and in this manner transmitted from generation to genera-

tion through the ages, as the "sins of the father have been visited on the children even to the tenth generation," aye to the thousandth. Giving attention to this fact only, to the diseased individual as the primary cause, the dangerous elements to be combatted, the hygienists of the past centuries have rendered our lives almost absolutely exempt from the dangers of such diseases as the black death and bubo pest, which were once a terror to all Europe. We all know that we are in absolute safety against smallpox if there is not a diseased person in our section of the country and none are permitted to come into it. Every man knows, excuse the freedom, that if he does not go on a lark in his visitations to conventions, or on business in any large city, that he is absolutely safe against the greater pox and another female complaint, just as well as he knows that if the woman is healthy he is in no danger at all. We know that the avoidance of contact with persons having disease of this fixed contagious type is sufficient to keep us free from such diseases.

Let us turn to animal diseases of this character for a few illustrations.

We all know that we have no dread of glanders among our horses if there is no horse afflicted with the disease in our section of the country. If there is, we kill that horse, and if the only one, after moderate cleansing and disinfection, we feel safe once more. We know that we ourselves are in no danger whatever of glanders, no matter how closely we come in contact with healthy horses, while many a man has sacrificed his life, either ignorantly or stupidly, by fooling with "cures" for glandered horses. To-day, we of the great prairie States once more sleep peacefully regarding any danger to our cattle from pleuro-pneumonia, but such was not the case when it existed in Chicago, and not only this State, but every Western State quarantined against Cook county, Ill., cattle. Why did we quarantine against the cattle from Cook county? Because contagious pleuro-pneumonia finds its only origin and only cause of spread in diseased cattle; because the disease is a contagious one. This very Illinois Live Stock Commission deserves the highest commendation of the entire live stock breeders of the country for the energy with which it went to work and stamped out the lung plague in Illinois; even in spite of the lukewarm support of the Agricultural Department at Washington, as much as that department deserves the most determined and energetic condemnation for the way it nurses and supports that same plague around New York, when a similar energy to that displayed by the Illinois Commission could free the country absolutely from the stigma of having such a dangerous contagious disease among our cattle. Once "stamped out" in this country, once sure that not a single case of the contagious lung plague existed in the country, we should all feel safe, but would equally well know that it could never come again, unless a diseased animal was imported from Europe.

In contagious diseases our chief attention is directed toward the diseased animal. It, or he, is the source of danger.

It is because of this that the rinderpest seldom visits western Europe at present, and has never been imported into this country. The animals do not live long enough to get here. In eastern Europe a constant watch of military precision is kept over the importation or smuggling of cattle from Russia, the home of rinderpest. The Illinois Live Stock Commission pronounce lump jaw to be a "dangerous contagious disease;" is the lung trouble any more than that? At the late trial it was amusing to see the witnesses for the Commission hastily deny or enter a protest if the lawyers for the plaintiff spoke of lump jaw as a "highly" contagious disease. As most contagious diseases that we know of are "highly" dangerous to life in a shorter or longer time, and "highly dangerous to the well-being of the community, it was rather singular to observe how "highly" sensitive those persons were on that point. Why has not that Commission not put in force the laws and regulations it is empowered to do in reference to all contagious diseases in live stock, in its treatment of lump jawed cattle?

The law certainly draws no line of distinction between "highly" and "dangerous" contagious diseases. It simply and plainly authorizes such Sanitary Commission to act to the full extent of their authority in all cases of contagious diseases.

What does it authorize them to do in such cases? To kill glandered horses, to kill or dispose of all cattle afflicted with pleuro pneumonia; to peremptorily stop all traffic in or with such animals, or all which have been in contact with them, as suspects; to quarantine against any State, or locality, in which such diseases exist according to their character and the common danger to the community; to burn, tear down, cleanse or disinfect all premises or vehicles where such animals have been; to put the necessary limitations upon the free movement of human beings who have been in contact with such animals, or where they are or have been.

Briefly stated, such are the actions we have a right to expect, and for which they have been created by law, of any Sanitary Board, be it for the protection of human or animal life.

Has this Illinois Live Stock Commission done any of these things, except ruthlessly slaughter the animals, in reference to lump jaw? Has it sent due notification to the governments of other States that they have a "dangerous contagious disease" in their cattle, known as lump jaw, or actinomycosis, and such cattle will not be allowed to enter the territory of Illinois? Has it notified the commission houses in due and legal form to warn their patrons against shipping in cattle afflicted with this dangerous contagious disease? Has it isolated the balance of a car load when one or two lump jawed steers were among the others, or taken one single step to protect the other cattle in the stock yards from contact with animals having this dangerous contagious disease? Has it cleansed and disinfected stock cars, or the pens in the stock yards? In fact, has it put in action one single preventive procedure that it actually would have done had a real contagious disease of any kind been among the cattle shipped into Chicago? Being such a "dangerous contagious disease" to both cattle and men as they claim, have they ever warned the poor unfortunates in the stock yards condemned to work in such a pest house, against the terrible danger they were not only exposing themselves to, but nightly carrying home to their families? I have seen these men around among these cattle themselves; I have seen them cutting up and examining them, yet I never saw them exercise a particle of caution, or warn the men engaged in slaughtering them to do so; in fact, they all acted as unconcerned as if they were setting down to a good meal; no one present seemed to have an idea that the cattle being killed were afflicted with a dangerous contagious disease, or dangerous to man or beast.

[CONCLUDED NEXT WEEK.]

The Times and Register

A Weekly Journal of Medicine and Surgery.

WILLIAM F. WAUGH, A.M., M.D., Managing Editor.

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THE PHILADELPHIA HOSPITAL.

A GOOD deal of excitement has been created by the action of Mr. Freeman, the present head of the Board of Charities and Correction, in removing the titles designating the infirmary at Blockley as the Philadelphia City Hospital. Mr. Freeman claimed that nowhere could there be found any ordinance by which the City of Philadelphia had created a great free hospital, whose inmates were not to be regarded as paupers, and whose administration was in a measure distinct from that of the Almshouse. He held that the Hospital at Blockley was simply the infirmary of the City Almshouse, and demanded by what legal warrant a free hospital, with distinct management, another name, and a training school for nurses, had been engrafted upon the Almshouse. The question has been discussed at large in the newspapers, and the legal advisers of the city have decided that the hospital and all projects germain to it are legally warranted. A strong sentiment has been manifested in favor of the institution, and of its value as a free hospital and a most valuable training school for nurses and physicians. But it is impossible to follow out the argument without acknowledging that Mr. Freeman is practically in the right. The Almshouse is a place for paupers, and paupers only. Its infirmary is for the treatment of the pauper sick. These the city is bound to take care of, and for this purpose she provides the Almshouse. But between the pauper who happens to get sick while an inmate of the Almshouse, and the persons who may be compelled to seek admission in a free hospital, there is a wide difference. A man may be able to support his family independently, and yet a broken leg may find him totally unprepared to pay for proper attendance, which, perhaps, can be best given at a hospital. It is unjust to the man, and contrary to public polity, to stigmatize him as a pauper, because these circumstances may compel him to seek such aid. Here is the need of a free hospital, and this the city ought to supply. But such an institution ought not to be engrafted upon an Almshouse. This, it seems to us, is the ultimate point to which Mr. Freeman's action is directed. If the City of Philadelphia deems it a duty to provide a hospital for the free treatment of persons temporarily unable to pay for it, the city should make provision for this object specifically, and not mix it up with the Almshouse.

There are many reasons for this separation, besides those already mentioned. The admirable school for physicians could be extended so that its advantages could be shared by a larger number. At present, the city hospital is the greatest medical school in America, but its benefits are limited to twenty pupils per annum. Many more could be trained in its wards, without diminishing the efficiency of the service, or adding to the expenses, as any young graduate would gladly pay for his living expenses in return for the privileges of a resident. As to the nurses' school, the papers just now are filled with glowing panegyrics upon its many excellencies. The nursing of paupers, with the limited means at the disposal of a municipal charity, the association with the depraved wretches who form a certain proportion of the hospital's inmates, would seem not calculated to develop the kindlier feelings of humanity, and cultivate the delicate skill in ministering to the invalid of a better class, so essential to a really efficient nurse. But the encomiums lavished on this school by eminent surgeons and physicians show that this cannot be the case, and that, as Dr. Horatio C. Wood is reported to have said (*vide Public Ledger*, May 5, 1892), "the only thing that redeems the Philadelphia Hospital is the nurses' training school." If such be the case, it would be better to call the institution the "Philadelphia Training School for Nurses, and City Hospital." If the hospital were separated completely from the Almshouse, it is probable that many benefactions that now go to endow other hospitals that are yet not free, or only so to a very limited extent, would go to the city's free hospital, where the charity could not be doubted. Endowments, scholarships and other legacies could render the burden lighter to the public, and increase the usefulness of the institution, as a hospital and as a medical school.

In every way the separation would be most beneficial; and we trust that this will be the final result of the question raised by Mr. Freeman.

Annotation.

JOHN S. STEWART, M.D.

DR. JOHN S. STEWART died April, 11, 1892, of pulmonary disease. In his infancy he suffered an attack of catarrhal pneumonia, with atelectasis, which left him permanently crippled as to his respiratory organs; the collapsed lung never unfolding. During his school-days he suffered from this cause, and was compelled to leave college before graduation, on account of bronchial hemorrhages. He entered the Medico-Chirurgical College at Philadelphia, in 1882, and for three successive years stood at the head of his class, with an average over 92; a feat accomplished by but one other student in the history of the college. For some years Dr. Stewart was associated in practice

with his uncle, Prof. W. S. Stewart, but, his lung troubling him again, he took a trip to South America, and another to California, from which he returned greatly improved in health. He then devoted himself to the diseases of the eye, as a specialty. In this he was beginning to make himself known; winning friends everywhere by his unassuming demeanor, his ability and the earnest attention given to his work. Several articles on ophthalmological topics were contributed by him to the medical journals; the last, a paper upon the use of gelatine discs in the eye, read before the Philadelphia County Medical Society and published in this journal the week before his death. Besides this, he published an Obstetric Synopsis, which was very favorably received. He left a mss. work upon ophthalmology, which will probably be published posthumously.

Dr. Stewart was quiet and reserved in his manner, but those who were admitted to his intimacy found in him one of those rare spirits seldom met with in this latter day; scrupulously upright in all his dealings; pure in thought and deed; earnest and self-forgetful in his work. His death adds one more instance of the singular fatality that has robbed the Medico-Chirurgical College of its brightest graduates; those from whom its faculty had reason to expect honor.

REPORT OF

W. F. HUTCHINSON, M.D.,
Assistant Secretary-General, Pan-American Medical Congress.

ON BOARD STEAMSHIP "NEPTUNE."
At Sea, April 8, 1892.

C. A. L. Read, M.D., Secretary-General, Pan-American Medical Congress.

DEAR DOCTOR:—On my return voyage from the West Indies, amidst the many difficulties attending writing at sea on a small ship, I write you this brief summary of the work done by me under my commission as Assistant Secretary-General for the Congress.

In the first place, as Dr. De Wolf has already informed you, I found it impracticable to consolidate the entire British West Indies into one section for our purposes. It would be impossible to do this in any cause or event. They are so widely separated in interests and aims that even official intercouse between them goes through England; are jealous of each other to a certain extent, and are but little acquainted, although but a few score of miles of blue water divides their shores. Even the official people rarely know each other, and when I mentioned the names of those chosen to the Congress at Barbadoes to their colleagues at Jamaica, scarcely a name was familiar, and *vice versa*.

So I was compelled to organize them separately, and, by this method of conciliating diverse and opposed minds, have aroused a spirit of enthusiasm for the Congress and secured an attendance of delegates.

For this reason of geographical and social sundering, I suggest that upon the list of "Constituent countries," the British West Indies be made four divisions: The Bahamas and Bermuda, the Leeward Islands and Jamaica, Trinidad and the Windward Islands, and British Guiana and Honduras.

The Danish Islands must be kept separate, as well as the French and Dutch.

By so doing we shall have a longer list of lands, it is true, but I am satisfied that it is essential and will be better in every way.

All these Islands are now organized as auxiliary to the Congress, are in working order and at work, and I think that I may fairly say that this result is largely due to my personal acquaintance with the best people in them, official and social.

As you are aware, I sailed from New York on the 17th of February last, and proceeded to St. Thomas and Santa Cruz where the Danish West Indies were organized.

Thence to St. Martins, where, with the aid of His Excellency, Governor Olivier, the Dutch colonies were arranged for, leaving, however, the work of appointments to be done by correspondence later.

Thence to St. Kitts, where, "as a considerable center of population," a full staff of officers was commissioned.

Thence to Antigua, where, as capital of the Leeward Islands, the same thing was done.

Thence to the French Islands, but, owing to the fact that Guadaloupe was quarantined against New York for typhus fever, I was compelled to proceed to Martinique. There I met with extreme courtesy and attention from the senior medical man in the colony, Dr. Arnaud, whom I commissioned member of the Foreign Auxiliary Committee. In his company I visited most of the leading medical men, explained to each the object of the Congress in his own tongue, and awakened much cordial interest.

The matter of further organization of the French colonies was left in the hands of Dr. Arnaud, who at once placed his commission and the programme in the hands of an interpreter, ordered circulars printed calling meetings, and otherwise bestirred himself actively.

I proceeded thence to Trinidad. There, as you know, Dr. De Wolf had been commissioned several months ago as member of the Foreign Executive Committee; but, owing to the impossibility of combining all the Islands, and the need of hard personal effort in each, in his case forbidden by official confinement to duty, he had been unable to do much. He welcomed me warmly, and at a meeting of the profession at Port-of-Spain an auxiliary was formed, and the officers chosen were duly commissioned, with the exception of the Vice-President, whose papers I beg that you will forward at once.

I had no commissions for Vice-Presidents with me, and the two gentlemen chosen to that position in Trinidad and Barbadoes will be glad to receive their authority to act.

Thence I proceeded, via St. Vincent, to Barbadoes. Being unable to reach Grenada, capital of the Windward Islands, I placed the matter in the hands of Dr. Letsom, of St. Vincent, who promised to enter into correspondence with his colleagues at once and arrange for an auxiliary. Permit me to acknowledge here the courtesy of His Honor, Captain Maling, of St. Vincent, the Governor, who entertained me in a charming manner at Government House, and made my stay in the Island a pleasant one.

A telegram to Dr. Archer at Barbadoes prepared the way for my coming, and on the 26th of March, a large and enthusiastic meeting was held in the board room of the General Hospital, at which a complete organization was effected, with the exception of the member of the Foreign Auxiliary Committee, Dr. Gaskin, who had been previously commissioned by you and whose authority I confirmed.

Dining the next evening with Sir James Hay, the Governor, I found His Excellency fully imbued with the spirit of progress represented by the Congress, and feel confident of his hearty co-operation in the matter.

From Barbadoes I proceeded to Jamaica. There, owing to the extent of the Island and need of more time than I had at my disposal, I found some difficulty in getting a large meeting together. But the Hon. Dr. Phillippo, ex-President of the Medical Society, was equal to the emergency. He gave up a large part of his time to the work, and labored so energetically that a meeting was arranged at the Jamaica Institute for April 5, where the gentlemen present voted to organize auxiliary to the Congress, and chose Dr. Da Costa member of the Foreign Auxiliary Committee, whom I commissioned. A future meeting was provided for, to which all medical men in the colony will be invited, and I anticipate a large representation from Jamaica.

I wish cordially to acknowledge the many attentions received from Dr. Phillippo and from Mr. Estes, United States Consul, who attended the meeting officially, and spoke for his government in favor of the Congress.

With Jamaica, my labors closed. Advancing season, increasing heat and home duties recalled me to America, and I return, knowing that most of those countries to which your commission of January 12 accredited me have been thoroughly canvassed in the interest of the Congress, and their cordial co-operation secured. The representatives from these islands will bring an amount of information not found in books; will have an opportunity to be acquainted with each other and with the United States, and will, I believe, return with a conviction that in such convocations as this promises to be, lies the keeping of the highest interests, vital and social, of the Western hemisphere.

No one could accuse a Medical Congress of any political bias or tendency; and the assembling of so many prominent and influential men—and none are more so than doctors in medicine of the West Indies—cannot fail to impress them and the people whom they shall officially represent, with the idea that future advances in science in the American Continent lies in combination of their residents in study of such questions as are peculiar to themselves.

For men from all parts of these countries to meet; to become personally known to each other; to interchange ideas, and see for themselves what we active Americans are doing—will be an object-lesson whose value it will be difficult to overestimate, whose influence must be wide and lasting.

I have thought it were consonant with republican principles to avoid making appointments of men to official position in the Congress until they had been elected by their own colleagues, and all names sent in have received such suffrage. The widest possible publicity has been given to the movement. Proceedings of local meetings have been printed in all local papers, and I have to express thanks for editorial courtesies received everywhere.

Following is a list of officers chosen to the Congress, all of whom have been commissioned, except the Vice Presidents and the men from the Dutch West Indies:

Danish West Indies.

Member of International Auxiliary Committee—Dr. P. Mortensen, St. Thomas (King's Physician).

Secretaries of Sections—Dr. Erichsen, St. Thomas; Dr. K. Kalmer, Santa Cruz.

Dutch West Indies.

Member of Foreign Auxiliary Committee—Dr. J. J. Senior, Curacao.

Secretaries of Sections—Dr. C. Van Romondt, St. Martins; Dr. A. D. Jesurun, Curacao.

French West Indies.

Member of Foreign Auxiliary Committee—Dr. Arnaud, Martinique.

St. Kitts and Nevis.

Member of Foreign Auxiliary Committee—Dr. W. J. Branch, St. Kitts.

Secretaries of Sections—Dr. A. P. Boon, St. Kitts; Dr. G. H. Mapleton, St. Kitts.

Leeward Islands.

Member of Foreign Auxiliary Committee—Dr. A. G. McHattie.

Secretaries of Sections—Dr. G. E. Pierez, Dr. A. E. Edwards, Antigua; Dr. P. Numa Rat, E. Dominica.

Barbadoes.

Vice-President—Dr. Thomas Brown.

Member of Foreign Auxiliary Committee—Dr. Gaskin.

Secretaries of Sections—Dr. C. E. Gooding, Dr. Cuthbert Bowen.

Trinidad.

Vice-President—Surgeon-General S. L. Crane.

Member of Foreign Executive Committee—Dr. J. A. De Wolf.

Member of Foreign Auxiliary Committee—Dr. F. G. C. Damien.

Secretaries of Sections—Dr. Heaven N. Rake, Dr. E. J. Read, Port-of-Spain; Dr. John Tulloch, Tobago.

Jamaica.

Member of Foreign Auxiliary Committee—Dr. Da Costa.

All of which is respectfully submitted,

WILLIAM F. HUTCHINSON, M.D.,
Assistant Secretary-General Pan-American Medical Congress.

Letter to the Editor.

WITH much interest did I read your Pneumonia Number, as well as the titles of all the articles on pneumonia written during the past year, but nowhere did I see mentioned a case of parotitis following a case of pneumonia. Lately having had such a case, and thinking it may interest some of your readers I give a brief history of it:

J. V., aged forty years; the entire right lung was consolidated and impervious to air. For two days the temperature fluctuated between 105° and 106°, pulse 130–138, and respirations 40-45. The indications being for a heart sedative and an antipyretic, 5 grains of phenacetine was given four times a day to meet both requirements. After the second dose the patient was bathed in a profuse perspiration, continuing as long as the drug was continued. I am inclined to think that, were it not for this almost continuous perspiring, his temperature would have risen much higher with disastrous result. However, on the third day, the character of the heart's action having changed, phenacetine was discontinued and small doses of strychnine substituted. At this time the temperature was between 103° and 104°, and remained so until the crisis, which took place two days later, or, on the ninth day of the disease. Even at this time the sputum which was very profuse, was decidedly "rusty," in fact, blood was plainly to be seen in it.

The patient was convalescing rapidly when, on the seventh day after the crisis, his temperature rose to 102°, and he, who had not complained of any pain during the attack of pneumonia, was now complaining of severe pain at the angle of his jaw (right), so much so, that he was unable to sleep during the

night. On the next morning a large and painful swelling had made its appearance, and the thermometer registered 103.2°. He was given a brisk mercurial purgative, and the swelling was painted with tr. iodine twice a day. On the fourth day it felt as if suppuration was to take place, but it soon resolved, and on the eighth day the swelling had entirely disappeared.

The points of interest in this case are—

1. The profuse perspiration caused by phenacetine.
2. The large amount of blood in the sputum, and the long continuance of it.
3. The convalescence being complicated with unilateral parotitis.
4. The ending in resolution, instead of suppuration.

* *

The Medical Digest.

NOTE ON CONCUSSION OF THE SPINAL CORD.—As a small contribution to the literature of concussion of the spinal cord, and as emphasing the interest attaching to such cases as the one that appeared in *The Lancet*, of October 24, 1891, p. 928, reported by Mr. Clutton, I think the following worth recording:

A. C., aged forty; a goods guard; while attending to the lamp attached to the rear of his van, his train being in motion, lost his balance and fell backward into the ballast way. He had no loss of consciousness, for he at once discovered that his legs were paralyzed, and concluded that he had "broken his back." Some hours later he was admitted into the Cumberland Infirmary, and when I saw him I found him to be a tall, muscular, and very intelligent man, making no complaint beyond that of his powerless limbs. On examination of his back there was seen to be in the central line a considerable localized bruising over the lowest dorsal and upper lumbar spines, attended by marked tenderness, but there was no evidence of any injury to the spinal column. This, I need hardly add, was very carefully sought for. His legs were absolutely paralyzed. Under his utmost efforts there was no evidence of muscular movement in them. Sensation was distinctly impaired. The bladder was distended and required relief by the catheter; the bowels were constipated; his tempera ture was subnormal, and his pulse feeble, but quiet. His consciousness and the recollection of his accident were perfect. For two days after his admission there was no evidence of improvement in mobility, but sensation returned somewhat rapidly. On the third day he could move his ankles and toes, and could very feebly and slowly draw up his legs, while the bladder was beginning to regain its expulsive power; and at the end of a week he could, while resting in bed, move his limbs freely, and the use of the catheter was no longer necessary. Sensation was then fully re-established. His temperature, normal on the day following his accident, never arose above 99.4°, and this only for two days.[1] Three weeks after his admission he was allowed out of bed, when it was found that although he could stand firmly, his power of walking was feeble and unsteady. Six weeks after his accident, and when with the aid of a stick he could move about with comparative freedom, he was made an outpatient, his statement then being that walking greatly fatigued him, and that extra effort in this way was always followed by stiffness, weariness, and numbness in the legs. His limbs were, however, not wasted, their muscular tonicity was fairly good, and their sensations quite normal. Two months later he ceased his attendance, and when, a year or two afterwards, I had an opportunity of examining him I found him in perfect health, his story being that he was then as vigorous as in his earlier days.

A good many years have passed since then, and the case, at least as regards its completeness, remains with me as a solitary experience. I regarded it—rare as I ventured to believe such cases to be—as one of spinal concussion without simultaneous injury to the spinal column; but what the conditions were that underlay its symptoms remained a matter of conjecture. A short time ago, and in quite another field of observation, I believe I found for them a probable explanation, and thus: A good stag was stalked to within eighty yards, and aim was taken at the upper part of his neck. He sank instantly to the shot, and the keeper, running in, divided freely the vessels of the throat. On introducing my finger into the bullet wound I found that it had been placed a little higher than was intended, that it had passed transversely through the muscles of the nape, and that in its passage it had but fractured the upper part of a vertebral spinous process. At once the thought occurred that the sudden collapse of the animal was due to damage to the spinal cord, and I, therefore, had the parts carefully removed for dissection. On clearing the vertebral column I found one spinous process alone injured, about half of which had been carried away; this, however, so cleanly that there was no marked fissuring of the portion that remained. The body of the injured vertebra was intact, as were those on each side of it, and the ligamentous structures were unharmed. Removal of the laminæ demonstrated more fully the perfect solidity of the column, and the fact that there was no effusion without, or injury to the spinal theca. The subarachnoid space was also free, but it was noticed that there was a considerable effusion of blood in the meshes of the pia mater in a direct line with the fractured spinous process. About three inches of the cord were removed for examination, and this was done by the cutting of thin transverse sections. When the portion of it which lay within the body of the damaged vertebra was reached, it was found to be the seat of numerous points of very minute ecchymoses which were scattered through its substance, and that at one or two points there existed disseminated specks of extravasated blood. Its texture was, however, quite firm, and neither under pressure nor when exposed to a stream of water was it found to be markedly softer or more diffluent than the bit of normal cord with which it was compared. Unfortunately, the examination was entirely macroscopic, neither a microscope nor the means for preserving and hardening the specimen being available. This is matter for regret, as it is possible that the existing lesions were not confined to the walls of the blood-vessels.

These two cases seem to me to supplement one another, and although it is as a rule unwise to generalize from single examples, we know so much of the symptomatology and of the morbid appearances that indicate cerebral concussion, that we could well anticipate similar conditions in a corresponding injury to the spinal cord. In both events the spinal column was subjected to sudden and severe jar, and in both with a very similar and striking result. Admitting that the injury in the instance of the stag was an ex-

[1] That no reference is made to the condition of the reflexes is explained by the fact that the case occurred anterior to the published researches of Erb and of Westphal.

ceptionally severe one (for the contusing power of a ball traveling at a high rate of velocity is fully recognized), still in the case of A. C. there were certain circumstances which tended to render the blow he received one of great severity. He fell backward from a train moving at fair speed in the opposite direction, receiving thus a considerable impulse; and when thus impelled he probably struck, judging from the localized nature of the bruise found, upon a projecting surface. Such conditions must have caused a sudden and severe stroke, and probably produced in him similar lesions to, but slighter than, those found in the stag.

Mr. Page, in his masterly and most valuable work upon "Injuries of the Spine and Spinal Cord," p. 19, refers to a case recorded by Dr. J. Liddell, in which a minie-ball, striking a man to the left of the second lumbar vertebra and emerging some inches to the right, fractured in its passage its spinous process. Paraplegia and paralysis of the bladder were at once developed, but at the end of two months were being gradually recovered from. In this instance the circumstances which gave rise to the injury were identical with those which occurred in the case of the stag, and I take it that the symptoms developed in the man owed their origin to such lesions in the spinal cord as were found to exist in that of the animal. Here, however, I would state my belief that even in the spinal cord we may have symptoms of a passing "concussion" in which probably the stroke being less severe, the harm actually done is neither so marked nor so grave. My reason for thinking this is that I have known a deer shot in the neck fall instantly and lie apparently dead for some little time, but, when approached, gather itself up with a visible effort and go off at sufficient speed to lead to its escape. In it, I imagine, the ball passed immediately over the spinal column without perhaps actually injuring it, but sufficiently close to communicate to it such a jar as for the time being inhibited the action of the organ it contained. What seems to render this more probable is the fact that a ball striking some other and non-vital part beyond, producing the sound of impact and the flight of the deer, would have afforded no immediate evidence of injury.[2] Even, however, in these lighter shocks, these so called "concussions," there is probably always a marked lesion existing. That this is usually so necropsies in fatal cases of cerebral concussion reveal to us, and in these the appearances found are precisely those which I have described as occurring in the spinal cord I examined. They are the coarse evidence of the jar the nervous mass has sustained, and the violence of which, so far as the naked eye carries us, seems to fall largely upon its vascular apparatus. Whether this be due, as Duret holds, to the result of force communicated to the cerebro-spinal fluid and its effects in the peri-vascular spaces, or to the vibratory thrill imparted to the mass itself, matters little; in either case what occurs is an apparently temporary, though happily incomplete, suspension of its essentially vital action. That this is the direct issue of the shake, and is independent of such vascular lesions as post-mortem examination reveals, is, I consider, probable; for although these mark well and emphatically the severity and nature of the injury sustained, they are, as a rule, insufficient *per se* to have produced a fatal result. That such lesions exist to a greater or less extent in all cases of cerebral and spinal concussion, which do not die well nigh instantaneously, is my belief, and they write the record that the notable disturbance of function observed depends upon *organic* injury. I have some doubt, however, that such evidence can never be absent, and it comes from the observation of cases of cerebral concussion seen at the moment the injury was received. I vividly remember the case of one man, certainly the most striking in my experience, whom I saw fall from a height of some fourteen feet, and alight upon his vertex in the hard roadway. The appearance he presented was very impressive; the terrible pallor of his face; the dropped jaw; the fixed pupil and insensitive eye; the arrested breathing, and the absence of all pulse at the wrist made me believe he was dead. It was only when, having bared his chest and put my ear over his heart, I could detect such far away and feeble sounds as mark generally a rapidly ebbing life, that I recognized that vitality was not quite extinct. Under the use of stimulants applied chiefly externally he slowly rallied, and ultimately recovered. But my reflection was this: Suppose that man had died, as in the presence of a heart with feeble walls or one less stable in its ennervation, and in the absence of help, he probably would, what then would have been the appearances presented by his brain? If, as the experiments of the most recent observers seem to show, a primary anæmia from arterial spasm, the result of a powerful peripheral irritation, be the primary step in the development of the phenomena of concussion, and a congestive stage the sequel to this, it is, I think, probable that the blood extravasations so generally found can only occur after vascular relaxation; and that, if cerebral shock be immediately fatal, a singularly pale brain, with great turgidity of its veins, may alone indicate the mode of dying. Such a belief is contrary to the teaching of the highest authorities, and it may be groundless; but it is just possible that it may explain the absence of all coarse cerebral lesions in certain cases, attached to the records of which are the names of generally reliable observers.

The occurrence of concussion of the brain, apart from marked injury to its bony case, has always been admitted, but it has been notably otherwise with concussion of the spinal cord. The experience which prompts this note proves, I think, that such an injury may occur without important structural injury of the vertebral column; that it is the result of severe and direct injury; that its symptoms are at once apparent, and that when they are present there is some easily recognizable lesion producing them. The further teaching is this, that the treatment of such cases should be that usually followed in those of cerebral concussions, the main indications being the pursuit of such measures primarily as will prevent the further effusion of blood from ruptured vessels, the prompt relief of that state of active congestion which, as in cases of cerebral concussion, may possibly supervene, and the allowance of such a period of rest as will enable nature to repair the important injuries the cord has certainly sustained.—Macdougall, *Lancet.*

[2] In this reasoning I am not forgetful of the "knock-down blow" from general shock, familiar alike to the army surgeon and to the sportsman, which is apt to follow the blow of a missile, but where the recovery is, as a rule, rapid.

THE ABBÉ KNEIPP AND KNEIPPISM (Dr. L. Reuss, in *Annales d'Hygiène Publique et de Mêdecine Legale*). —France has often been accused of abandoning herself to sudden and unreflecting enthusiasms. Even if the accusation be true, she is not the only country which can be accused of such things.

Germany, that classic country of reasoned criticism and scientific experiment, has recently presented an

example of an infatuation which astonished the world; for this, however, it has a justification in the incontestable worth of the *savant* who was the object of this infatuation and the importance of the end he had in view. This excuse cannot be made for the enthusiasm which our neighbors have felt during several years past for a modest country curate, of whom public opinion, on the other side of the Rhine, is on the road to make the creator of a complete system of hygiene and therapeutics, and to whom, before long, that opinion will award the title of a Saviour of Humanity.

In all the Empire of Germany there is not living to-day a parish priest better known than the Abbé Kneipp; a village more celebrated than Wœrishofen; a bathing place more run after than this Bavarian burg; nowhere are there made so many cures, almost miraculous; never have the German booksellers had a success comparable to that obtained by the works of Kneipp, of which more than 300,000 copies have been sold in four years. Everywhere are founded Kneipp institutions. Nothing is eaten but Kneipp bread; nothing is drunk but Kneipp coffee; nobody dresses without the Kneipp cloth. Finally, there is a Kneipp almanac, which has been translated into French, Hungarian, and English; which is put on sale everywhere and bought everywhere. If that is not the height of celebrity, I do not know myself.

The Abbé Kneipp is seventy years old. He has a square head, of which the forehead is surmounted by a mass of thick, white hair. Under heavy and bristling eyebrows are blue eyes endowed with extraordinary penetration. The dominant traits of his physiognomy are energy and vigor, tempered by great affability and genuine sweetness.

Born in 1821, at Stefansried, Sebastian Kneipp is the son of a poor weaver. At a very early age he had to earn his bread and learn the trade of his father. When very young, however, he was seized with an ardent desire to become a priest. The realization of his wish seemed impossible, on account of his poverty. When at last, by the most pinching economy, he saw his way clear to begin his studies at Munich, he had but thirty centimes a day to live on. This sum was not enough to give him sufficient nourishment. His blood became impoverished; he fell ill, and the physician despaired of saving his life. One day he came across Dr. Hahn's work on hydropathy. Kneipp followed the advice of the book, and treated himself with water. He even broke the ice in the Danube, when the thermometer was but fifteen degrees above zero, and plunged into the water. The result was that he got well, completed his studies, and was ordained priest in 1852.

From that time he has not failed to recommend to those about him to use cold water as a remedy for all diseases. After his appointment as curate of Wœrishofen his fame increased. In one year 30,000 sick persons came to Wœrishofen to be treated. He wrote a book, which was entitled "My Water-Cure," published in 1886, and which in four years reached a thirty-fifth edition. In 1889 he wrote a second volume, entitled "How People Ought to Live," and of this 70,000 copies have been sold.

He undertakes to cure a long list of maladies from asthma to shingles. For each of these maladies *Vater* Kneipp's principal, if not his only, medicine is cold water, applied in the shape of douches, foot-baths, head-baths, sitting-baths, and so on. Given in the form of drink, the water is of tenmixed with infusions, decoctions, or alcoholic tinctures. Always, however, water is the base of the medication. The simples recommended by the Abbé are very numerous, and the country people know them well. The leaves and flowers and roots and berries which he uses can be found, with few exceptions, at all our herbalists.

The worthy Abbé's system, however, is not one of therapeutics alone, it is also one of hygiene. He maintains that the many diseases of our day, affections of the heart or the breast, gastritis, anæmia, nervous disorders, were almost unknown to our ancestors, and are the result of our bad mode of living. He declares that the most of our maladies are due to trouble in the circulation of the blood. To remedy this, the body should be subjected to the action of the exterior air, combined or not with the action of icy cold water. Children should be allowed to go without shoes or stockings. Adults should often walk in the fields, even in winter, barefooted. In winter a walk with bare feet in the snow is absolutely recommended; only the snow should be fine like dust, freshly fallen, and there should not be a cold and piercing wind blowing. The length of this snow walk should not exceed three or four minutes. A walk in running water has an incontestable tonic effect.

To keep well, according to Kneipp, you must dress and eat according to a certain system. You must discard woolen clothing next to the skin. Kneipp declares that if wool develops more heat than other cloth, it does so to the detriment of the human body. You must wear next to the skin a shirt of coarse cloth, as coarse as that of which grain sacks are made. Fur collars, fur gloves, knit vests and shawls, and all that sort of thing, must be absolutely discarded.

Finally, if people want to get well and stay well, they must change their diet and drink. They must eat food which is richest in nitrogen: milk, cheese, peas, beans, lentils, meat, and fish. They must avoid food poor in nitrogen, like the cereals, potatoes, vegetables and fruits, and have nothing to do with fats and oils. They must drink a minimum of wine, of cider, of beer, and have nothing to do with brandy. Coffee, with or without milk, chocolate and tea are anathematized, especially coffee with milk, which debilitates the stomach, leaving it without digesting. Coffee with milk, and beer, Kneipp counsels to replace with coffee prepared from acorns or with malt. This drink (Kneipp coffee) has nutritive and sedative qualities, in which ordinary coffee is absolutely lacking, and has also an excellent taste.

Such is Kneippism. Whether it will make the tour of the world, or even the tour of all Germany, the future alone can disclose. At all events. the system, if it cannot be recommended in its entirety, is not without commendable features.

—*Literary Digest.*

A Successful Case of Ileo-Sigmoidostomy (Senn's Method) for Intestinal Obstuction Due to Malignant Disease of the Hepatic Flexure of the Colon; With Some Remarks on Intestinal Anastomosis and a Description of a Modification of Senn's Bone Plates.[1]—The following are the notes of the case: G. F., aged thirty-five, was admitted to the Leeds Infirmary on March 17, 1891, under the care of Mr. W. H. Brown, with marked symptoms of intestinal obstruction. The patient said that since Christmas he had had a good deal of pain in the right iliac region, and for the last three weeks he had been unable to work. Three

[1] Paper read before the Leeds and West Riding Medico-Chirurgical Society on December 4, 1891.

days before admission vomiting commenced, and continued at intervals; no motion or flatus was passed during this interval. On admission the patient was very ill, suffering from severe spasmodic attacks of abdominal pain and frequent vomiting. The abdomen was distended. The intestines could be seen distended and moving beneath the abdominal wall. The whole of the right side of the hypogastrium was dull. Before admission the patient had a small dose of morphine. Soon after admission the bowels were well opened. An enema was given, followed by another good evacuation. After this the patient was much better, vomiting and pain ceased. He left the infirmary on March 17.

He was omitted again on August 14 with well-marked intestinal obstruction. At no time since leaving the infirmary had he felt really well. He had had occasional attacks of vomiting and constipation, often complaining of pain after food. He had seldom been able to work more than two or three days at a time. Latterly the attacks had increased in frequency and severity. The bowels had not been opened for the past five days; he passed flatus a few times during this period, and vomited frequently. On admission the following note was made: "Patient looking very ill; not much collapsed. Temperature 98.4°; pulse 100. Abdomen distended; resonant. Except low down in the flanks, coils of distended intestine can be easily seen moving (sometimes violently) through the abdominal parietes at frequent intervals. The movements can be easily excited on palpating the abdomen. No tumor can be seen or felt in any part of the abdomen. Complains of a griping intermittent pain, radiating all over the abdomen. Between the attacks of pain there is merely a feeling of distension." Since admission he has vomited several times; the vomit has not been feculent at any time. He has not passed any blood or pus per anum. Nothing felt by rectal examination. Soon after admission I saw the case with Mr. W. H. Brown, under whose care the patient had been admitted, and we agreed that as enemata had answered so well on a former occasion they should again be tried. Mr. Brown, going away the next day, handed the case over to my charge. A gravitation enema of a pint of warm olive oil was given: this was soon followed by a good evacuation, after this a simple enema was given, with good results.

August 15: Feels much more comfortable; pain and distension much less; vomiting has ceased.

August 19: Has been feeling more comfortable; still some distension of abdomen. No vomiting; bowels opened by enemata.

August 23: During last few days patient has not been quite so comfortable. Some feeling of nausea; bowels opened by enemata. Abdomen still distended; patient has a feeling of general abdominal discomfort. Sometimes movements of the bowels can be seen, and to-day can be easily excited by abdominal palpation. At a consultation with the majority of the surgical staff the general opinion expressed was that the case was one of intestinal obstruction due to malignant disease of the colon, probably at the upper part of the sigmoid flexure. Abdominal exploration was advised, with a view of removing the growth if possible; if not, to stitch the bowel above the obstruction to a part of the collapsed bowel below.

August 24: The patient being under the influence of ether, with the assistance of Mr. Moynihan, the resident surgical officer, I operated by making an incision three inches long in the middle line between the umbilicus and pubes, going through the edge of the right rectus. All bleeding having been stopped, the peritoneal cavity was opened to the same extent. There was some fluid in the peritoneal cavity. The small intestines were very much distended, some parts of the ileum being as much as two inches in diameter. They were injected. Cæcum and ascending colon distended. Transverse, descending colon, and sigmoid flexure collapsed. A large mass of growth about the size of an orange was found situated in the hepatic flexure and fixed. Mr. Mayo Robson, who was present at the operation, after having examined, agreed with me as to the inadvisability of attempting removal, and thought with me the best plan of treating the case would be to stitch the lower part of the ileum to the upper part of the sigmoid flexure. This I did by first pulling a loop of ileum out of the abdominal wound, emptying it of its contents, then surrounded it with a piece of India-rubber tubing. The same was done to a loop of sigmoid flexure. An incision about one inch long was made in the convex surface of each. Senn's decalcified bone plates were inserted, and secured in the usual way. Four extra silk sutures were then put in round the margin of the plate, on the convex surface of the two pieces of bowel, to give a little extra security. The bowels were then replaced in the abdominal cavity, the cavity carefully wiped out, and the abdominal wound stitched up in three layers—peritoneum, muscles and fascia, and skin.

August 26: Patient feels very well. Has passed flatus; no vomiting; temperature normal; less distension of abdomen.

August 28: Patient still feels very well. Had bowels moved to-day. Sits up in bed.

September 1: Has improved since last note. Dressed to-day, wound quite healed; no distension of the abdomen. One of the bone-plates has passed per anum to-day.

September 5: Still improving; bowels acting regularly.

September 7: Patient feels very well; has been up to-day—*i. e.*, fourteen days after operation.

September 10: Improvement maintained; appetite good.

September 12: Says he feels perfectly well.

September 16: Left infirmary to-day—*i. e.*, twenty-three days after operation. Temperature 100.2° on the mornings of the 25th and 26th. Temperature 99.4° on the evening of the 27th, and after that normal.

Diet.—For the first five or six days after the operation he was fed chiefly on milk and Benger's food. Had fish on August 31, chicken on September 3, chop on September 4, ordinary diet on September 7. Patient was shown at the meeting of the Leeds and West Riding Medico-Chirurgical Society on October 9; was apparently very comfortable; no abdominal distension; bowels opened every day. A few days after this he went to work as a miner.

The case described above is an additional demonstration to the cases already recorded, of the possibility of treating intestinal obstruction by establishing a communication between the distended bowel above the obstruction and the collapsed bowel below, and so cutting off the obstructing portion from the intestinal tract. We owe to Senn an enormous debt for this great advance in the treatment of intestinal obstruction, and, considering his paper was read in September, 1887, at the International Medical Congress at Washington, it is very remarkable that up to the present time only four cases have been recorded of this method having been used for the treatment of

intestinal obstruction. Two were performed by Senn, one by Mr. F. B. Jessett, and the other by Mr. Reeves. They are referred to in a letter by Mr. Jessett in the *Lancet* of February 21, 1891. Similar operations have been performed for other causes in several cases—*e. g.*, injuries, pyloric obstruction, etc. This case differs somewhat from the other recorded cases in that the intestine was not divided, but a simple lateral anastomosis made. In Senn's two cases the growth was first excised; in the other two the operation of lateral implantation was performed; all of them necessitating a division of the intestine.

Before we were acquainted with this method, the treatment of cases of intestinal obstruction requiring surgical interference might have been arranged into three classes:

1. Those in which some definite obstruction was found and was relieved by operation.

2. Cases in which the obstruction was found and could not be removed, an artificial anus being made.

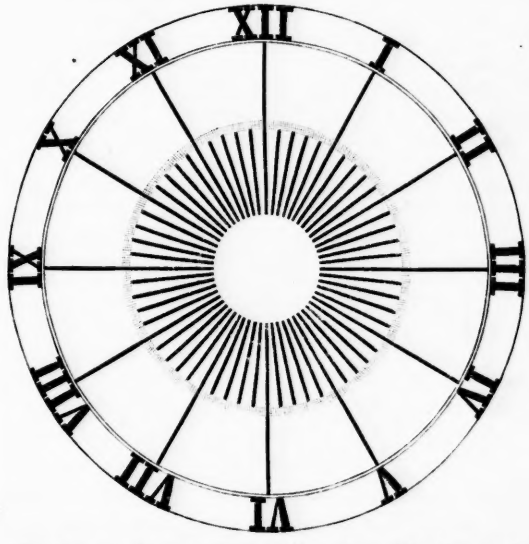
3. Cases in which, after a prolonged search, either the obstruction was or was not found, the patient dying of shock.

It is for the treatment of such cases as occur in Classes 2 and 3 that Senn's method offers such advantages. In Class 2 the artificial anus is obviated. In cases belonging to Class 3, if the obstruction cannot be found after a reasonable time has been expended in the search, then lateral anastomosis offers the best chances of a successful termination. From assisting at a large number of cases of abdominal sections, it has always struck me that time is a very important element in the success of a case. By this method there is a great saving of time. With a little practice on the cadaver, or having seen or assisted at the operation, it can very quickly be performed (in about ten or fifteen minutes). I have ventured to suggest a modification of Senn's plates, with the idea of (1) doing away with the four stitches attached to the upper and lower margins of the apertures of the plates, which perforate the whole thickness of the intestinal walls; (2) of performing the operation more quickly; (3) of ensuring a good opening between the two pieces of intestine. The plates have been made for me by Messrs. Maw, Son, and Thompson; the accompanying drawing is by Mr. Haigh. The suggested modification is to fix a tube of decalcified bone (Fig. 3) into the aperture of one of the plates (Fig. 2). This should be made to accurately fit into the aperture of the other (Fig. 1); by this method the two plates could be held together, and the two parts of the intestinal walls between them brought evenly into contact with each other. It might be well to have a piece of fine silk attached to each of the ends of the apertures (as marked A a, B b in Figs. 1 and 2), so that by tying A a and B b together greater security would be made. The intestinal walls around the margins of the plates should be attached by a few sutures.

In a very interesting paper by Dr. Halstead, of Baltimore, a method of lateral apposition by sutures is described. He insists very strongly on the importance of including some of the submucous layer of the intestinal wall in these and all suturing operations of the intestine. I am sure it is very important to recognize this observation, but cannot help thinking the bone plates will have the advantage over any method of suturing, owing to their simplicity and the time saved in using them.

—H. Littlewood, *Lancet.*

A New Astigmatic Test Chart.—Ophthalmic, subjective tests, must be adapted to the meanest intellect. In other words, a test which may be simplicity itself to the oculist, is apparently most complex to his patient. The successful ophthalmic surgeon is the one who can make the "dulled wit" appreciate these small differences and give answer to correlative questions.



Having made many experiments with the various astigmatic test cards in use, I have taken the "best out of many," and present to the readers of the *Record* a chart, which has given me the most satisfactory results. The figure above explains itself. The dotted circle at the periphery of the finer radiating lines, in my card is colored *red*, which aids materially in concentrating the attention of patients to the inner circle, when, if astigmatism exists, the meridian is easily ascertained.

To John L. Borsch & Co., Opticians, 1324 Walnut street, Philadelphia, I am indebted for some suggestions, and also for making these charts.

—L. Webster Fox, *Ophthalmic Record.*

A New Method of Posology.—M. Edouard Trouette has just presented to the Academy of Medicine a new method, called "By Duodecimal Doses," of toxic drugs that seems very practical, and destined to succeed the older ones. As long as the old pharmacopœias gave drugs that were more or less certain, and could be given in doses of rather good size without danger, it was well enough to go on as we do, but now that we have the alkaloids and concentrated drugs, we must needs be more careful. The toxic properties of these drugs being very variable, there results in the minds of the best educated and most capable physicians an inevitable confusion, which leads them in general practice to prescribe doses that are mostly too small, or else, if they are possessed of hardy minds, they drift into giving doses that may easily become dangerous. It is, in fact, very difficult to remember the exact number of milligrammes or fractions of milligrammes (or grains, for that matter), of each of the drugs one needs to use. And when it comes to giving the full therapeutical dose of digitaline, aconitine, strychnine, etc., it requires a good memory to do it without making the mistake of giving, on the one side, a useless dose, or, on the other, a dangerous one. This being so, a number of doctors have given up the use of the powerful alkaloids, thus

depriving themselves of excellent drugs for fear of doing harm.

The new method that M. Trouette proposes is a simple one. It consists of the rational division of the maximum dose that can be given in twenty-four hours. No matter what the nature of the drug, or what its poisonous quality may be, the dose (maximum) that can be given in twenty-four hours is to be divided into twelve doses, whether it be pills, granules, wafers, pastilles, or what not. For instance, the maximum dose of digitaline being one and a half milligrammes, if given in granules, these must be divided into twelve, so that each one contains the twelfth part of the maximum dose.

This method is to be applied to all the dangerous drugs, so that a physician will have no difficulty. He has only to remember that twelve of any one of these pills or granules make the maximum dose per twenty-four hours, so that he may give it, according to the case, in doses of two or four every hour or two hours, or as he likes, in any case being careful to keep an accurate account of the number given. This duodecimal dose must be made very exact, so that the doctor has only to count by twelve, and give what he knows to be a fraction of an exact twenty-hours' maximum. Of course, he remains the only judge as to the dose to be administered at one time, according to the indications as to age, individual susceptibility, and also as to accumulation in the organism. If the druggists adopt this method, all the dangers due to over-doses will be prevented. The confusion owing to the difference between an amorphous alkaloid and a crystallized one, and that between a soft extract and a dry one, or a watery extract and an alcoholic one, will no longer exist.

M. Trouette took twelve as a division, as it is equal to the half day, of twelve hours, and it is easy to subdivide into twenty-four.

There is no doubt that, according to the present system, it is very difficult to remember the therapuetical dose and the poisonous one of all the drugs. Medicines that have similar effects often have very different doses. Take, for instance, quinine, antipyrine, phenacetine, salicylates, etc. There is also the danger that the patient will forget his prescription and not know what dose to take. In any case there is a great and real practical interest in simplifying doses of medicines, and it is to be hoped that wholesale chemists will take serious note of M. Trouette's method.—Linn, *International Med. Magazine.*

THE TREATMENT OF PENETRATING GUN-SHOT WOUNDS OF THE ABDOMEN.—This very important subject, which was brought so prominently before the surgical world in 1883 and 1884 by the brilliant operations of Kocher, Bull, and Hamilton, has proved to have more than a passing interest. The old *laissez-faire* doctrine was not given up without a struggle, and even now there are some distinguished French surgeons, *e. g.*, Reclus and Nogués, who still cling to it, and attempt to prove that it gives the better results. In spite of their teaching, the French surgeons in general are gradually adopting laparotomy, and the American method of treating gun-shot wounds of the abdomen is fast becoming the accepted method.

Since the publication of my last article upon the treatment of gun-shot wounds in the abdomen, with a report of one hundred and sixty-five cases treated by laparotomy[1], little has been added to the literature of the subject, although the number of cases has been constantly increasing and the mortality of the operation constantly decreasing.

The statistics of Reclus, as I have already shown, cannot properly be used as a test of the comparative value of the two methods of treatment.[1]

He has given us eighty-eight cases of shot wounds of the abdomen supposed to be penetrating, with a mortality of only 25 per cent. treated by the expectant plan. He would have us believe that out of eighty-eight cases of penetrating shot wounds of the abdomen, 75.7 per cent. recovered under conservative treatment.

If this is true, it would be folly for us to longer advocate laparotomy, and the sooner we give up the operation the better for our patients. Yet we are not as yet forced to accept Reclus' statistics as the true estimate of the mortality of non-intervention, and the majority of surgeons still look upon a penetrating shot wound of the abdomen as a very serious injury, instead of the comparatively insignificant matter Reclus would have us consider it.

In my previous paper I collected 4,958 cases of penetrating wounds of the abdomen treated expectantly, with a mortality of 81 per cent.

The best surgeons for centuries have regarded the injury as almost universally fatal, and for this reason deaths (in civil life), looked upon as a matter of course, were not reported; while every recovery, from its very rarity, was published. The surgeon[2] who has reported the most recent case of recovery following operation, in New York, stated that he had previously treated two cases by non-interference, and that both had died. Neither was reported, as the result was regarded the natural one, and excited no comment. U. S. Army, 1865–1871, 20 cases of wounds of small intestines. All fatal. Surgeon-General's circular, No. 3. This will, I think, both explain the low mortality of Reclus' tables, and at the same time show how unfair it is to compare that mortality with the mortality following the operation.

To return to the operative method of treatment. The technique of the operation has been already so frequently explained that it is unnecessary to refer to it in these brief notes. The indications for operation are still debatable ground. Some advocate postponing the operation for "symptoms," others believe that if the external wound is in certain areas where the "small intestine" is unlikely to be wounded, the operation can be dispensed with; and still others believe that if several hours have passed before the patient is seen, and he is "doing well" abstention should be followed.

A careful study of 174 cases treated by laparotomy that I have collected, has led me to believe that all of these restrictions upon the principle of operative interference in penetrating gun-shot wounds of the abdomen are unwise and open to serious objections. These objections I have already dwelt upon at length, and will merely refer to them here:

1. Many cases with numerous wounds of the small intestine are absolutely without symptoms until peritonitis develops, and the chances of success from operation are greatly diminished.

2. There are no "areas" of safety. The idea that the penetrating wound must be a perforating wound in order to be dangerous is a mistaken idea, as shown by an analysis of the cases. Wounds of the small

[1] *Am. Jour. of Med. Sciences*, March, 1891.

[1] *Revue de Chir.*, February, 1890.

[2] Dr. Newton, Charity Hospital Alumni Association, April, 1892.

intestine are not, as generally regarded, much more grave than those of other viscera. In 50 cases that were analyzed carefully I found wounds of the stomach, liver, colon, and small intestine; all showed the same mortality in uncomplicated cases, viz., 66⅔ per cent.

3. When the patient is seen several hours after the injury, and is "doing well," even then, I believe, it is the safer plan to enlarge the wound, see if it be penetrating, and if so, perform abdominal section. If the patient is in such good condition, the simple exploration will add little to the danger, and it may discover wounds of the viscera which might easily have proved fatal without such exploration.

Dr. Bull's first successful case is in point. Seventeen hours after the injury his condition was good, pulse and temperature normal, yet the operation showed seven perforations of the small intestine. I have said nothing as to the hydrogen gas-test. The space allotted to me is not sufficient to permit a discussion of its merits or defects. I will only repeat the objections to it which summarized in my paper a year ago, and which have not yet been removed:

1. It is not an "infallible" index of the condition of the alimentary canal.

2. The danger of producing infection of the peritoneal cavity.

3. It shows nothing as to the condition of other viscera, wounds of which frequently demand operative interference.

4. It prolongs the operation, interferes with respiration, and adds to the shock.

5. It greatly increases the liability of the sutured wounds to give way.

The same objections hold true of air or any other gas that may be substituted for hydrogen gas.

These objections are not theoretical merely. I have collected fourteen cases where the gas test has been used (including Dr. Burrell's case of air insufflation); of these fourteen cases eleven died and three recovered.

Of the recoveries, in only one was the alimentary canal wounded.

Of the eleven deaths, ten died of septic peritonitis. Dalton's experience shows both the danger of relying upon it when negative, and the almost equal danger of distension and extravasation when positive. It has not met with favor in the East, and is not likely to be generally adopted.

Before closing, I wish to call attention to the recent brilliant showing of Dr. Dalton of St. Louis. In the *Annals of Surgery*, for December, 1891, he reported four cases of shot wounds of the abdomen which he treated by laparotomy. They were all severe cases (38-44 cal. bullets), but were operated upon within the first six hours. All should be regarded as recoveries. One case had been doing perfectly well for five days after the operation, when he fell from a high bed to the floor, striking upon his abdomen. His temperature in a few hours rose to 104°, and death followed twenty-four hours later. The autopsy showed that one of the sutured wounds of the stomach had been ruptured by the fall. This series of cases is the best that has yet been reported.

The last 9 cases that I have collected show 5 recoveries and 4 deaths.

Of the total 174 cases, 115 died and 59 recovered, giving a mortality of 66 per cent.

Laparotomy was performed in 9 cases in which no viscera were injured; of these cases 6 made prompt recoveries, while in 2 of the fatal cases the operation was delayed until the fourth and sixth days, and then performed for purulent peritonitis.

Conclusions.—Given a shot wound of the abdomen, the indications are:

1. *Exploratory incision* in the region of the wound to ascertain whether or not it be penetrating.

2. If penetrating, median laparotomy as soon as possible after the injury (unless contraindicated by severe shock).

3. Signs of peritonitis, just beginning or well developed, while diminishing the chances of success are by no means a contraindication for operative interference.—W. B. Coley, in *The Epitome.*

Spontaneous Extrusion of Uterine Fibroma.—Dr. J. A. Sigler reports the following case in the Memphis *Medical Monthly*, of April, 1892:

Brunette, forty-five years of age, nervous temperament, lying on her back with a bloody tumor about the size of a large cocoanut lying on the perineum. On closer examination I found it to be attached to uterus by a pedicle one inch in diameter. The pedicle was so short and so completely filled the vaginal outlet that I could not get my finger into the vagina sufficiently to ascertain its exact attachment to uterus, but decided at once that it was not an inverted uterus. After some persuasion we induced the patient to have it cut off. We ligated the pedicle as close to the vaginal outlet as possible, and cut it one-half inch from point of ligation. The ligated end receded at once and we syringed vaginal cavity with warm solution carbolic acid. She made a rapid recovery, and has enjoyed good health ever since.

The previous history of the case is as follows: For four or five years she had been troubled with falling of the womb (as she expressed it), with irregular hemorrhage, and on that morning while making up the bed the tumor was expelled, while emerging from rather a stooping posture. It was a fibroid, and I think it must have lain in vaginal cavity for some time, as the distal end from pedicle had almost the appearance of ordinary cuticule, and she said she had frequently pushed her womb (the tumor) back with her finger when it would come low down.

Medical News and Miscellany.

Superintendents of the Insane.—The Association of Medical Superintendents of the Insane held its opening session at the Arlington Hotel, Washington, May 3. Dr. E. A. Pace, of the Catholic University, delivered the address of welcome, and Dr. Daniel Clark, of Toronto, the retiring President, called the Association to order. During the morning session the following officers were elected: Dr. Judson B. Andrews, of New York, President; Dr. Peter Bryce, of Alabama, Vice-President; Dr. John Curwin, of Pennsylvania, Secretary. In the afternoon "The Surgical Treatment of Insanity," etc., was discussed by Dr. Howard A. Kelly, of Baltimore, Md.; Dr. George H. Rohe, of Catonsville, Md., and others.

Dr. H. M. Heard, of Baltimore; Dr. Chas. G. Hill, of Baltimore; Dr. B. Blackford, of Staunton, Va.; Dr. L. G. Atwood, of Fulton, Md.; Dr. Geo. H. Rohe, of Catonsville, Md.; Dr. E. N. Brush, of Towson, Md.; Dr. J. S. Lewis, of West Virginia, are among those present. The sessions will extend until Friday next.

DR. JAMES BORDLEY has been appointed physician for Queen Anne's Co., Va.

DR. N. B. KENNEDY, of Hillsboro, Texas, lost his house from an incendiary fire last Monday.

WILMINGTON'S BOARD OF HEALTH. — Mayor Willey has appointed the following as members of the Board of Health for the ensuing year: Dr. E. G. Shortlidge, Dr. A. E. Frantz, Joseph Jenkins, and J. H. Lewis. Dr. Willard Springer is Port Physician and member ex-officio. Joseph Jenkins will be plumber of the board, and J. H Lewis the business man. Dr. Frantz is a homœopathist, and the first one appointed to a position in the board for years. Dr. Shortlidge is the only member of the board re-appointed.

COMMENCEMENT EXERCISES OF THE MEDICO-CHIRURGICAL COLLEGE.—In the Chestnut Street Opera House, May 3, was held the eleventh annual commencement exercises of the Medico-Chirurgical College. Rev. Dr. Wm. Dayton Roberts led in prayer. Professor James M. Anders, Ph.D., M.D., made an address to the graduates. Degrees were conferred, by Professor William H. Pancoast, M.D., A.M., upon the following:

S. L. Anderson, Pennsylvania; Harry Jacob Bell, Pennsylvania; Charles H. Bennum, Delaware; C. Roberts Binder, Pennsylvania; J. H. Black, Ohio; Edward Casperson, Australia; Harry L. Clayton, Delaware; John H. Egan, New York; Frank Embery, Pennsylvania; Wilson S. Erdman, Pennsylvania; A. Hank Evans, Pennsylvania; Gordon L. Harker, New Jersey; Lynn Hoopes, Pennsylvania; S. Webb Horner, Pennsylvania; H. G. Kilpatrick, Pennsylvania; Jacob William Kline, Pennsylvania; A. E. McNamara, Pennsylvania; Bernard J. Murray, Pennsylvania; Alexander Ramsay, Pennsylvania; C. H. Richards, Pennsylvania; Victor C. Roberts, New Jersey; Charles J. Steim, Pennsylvania; Ner. D. Steele, Canada; F. W. Taube, Germany; John Tomlinson, Pennsylvania; John W. Walter, Pennsylvania; William N. Watson, Pennsylvania; H. S. Wilson, North Carolina.

These prizes were awarded:

The Faculty gold medal for the highest average on final examination—Frank Embery, Pennsylvania. Honorable mention: C. J. Steim, H. J. Bell, N. D. Steele, E. Casperson, H. L. Clayton, W. N. Watson, G. L. Harker, C. H. Richards, C. B. Binder, S. L. Anderson.

A gold medal for the highest average in the studies of the second year—George H. Crabtree, Maine. Honorable mention: Andrew H. Harris, John B. Hunter, George A. Trieman, W. L. Shindel, J. F. Shoemaker, W. H. Shields, H. M. Miley, Bert Haughmort, B. F. Brubaker, W. H. Pratt, J. McNichol, T. W. Moore, S. O. Falls, C. E. Beck, R. McKeage, A. F. Graf, C. E. Bowers, John M. Gray, E. G. Thompson.

A gold medal for the highest average in the studies of the first year—J. G. Hercelroth, Pennsylvania. Honorable mention: M. P. Warmuth. J. E. Hayes, W. Enfield, J. R. Goodwin, E. M. Kimmel, W. H. Workman, Charles Thompson, C. Rea, G. F. Levan, O. K. Speer, C. O. Sterner, E. A. Crueger, W. E. Powell, H. Beardwood, George F. Wise, H. M. Allen.

Faculty prize for the best original research—honorable mention: H. L. Clayton, Delaware.

Joseph Pancoast prize, given by the Professor of Anatomy for the best anatomical preparation—H. S. Williams, North Carolina.

Special prize offered by Dr. Spencer Morris for highest average in physical diagnosis and hygiene—C. J. Steim, Pennsylvania; Edward Casperson, Australia.

Special prize offered by Dr. Spencer Morris for best examination in forensic medicine—H. S. Williams, North Carolina; N. D. Steele, Canada.

A life size oil painting of Professor Pancoast, arrayed in the first gown of the college, the property of the college alumni, was presented to the Trustees of the college, in trust for the alumni.

WEEKLY Report of Interments in Philadelphia, from April 23 to April 30, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess of neck	1		Inanition		15
Alcoholism	1		Inflammation, brain	2	7
Apoplexy	10		" bronchi	4	7
Asthma	1		" kidneys	7	1
Anæmia	1		" larynx	2	2
Bright's disease	13	3	" heart	1	2
Burns and scalds	1	2	" lungs	25	26
Cancer	12		" peritoneum	4	1
Casualties	7	3	" pleura	1	
Congestion of the brain		1	" s. & bowels	3	5
" " lungs	3	5	Insanity	1	
Collapse of lungs		1	Jaundice		1
Cholera infantum		2	Leucocythemia	1	
Consumption of the lungs	48	8	Malformation		1
Convulsions		15	Marasmus		13
Croup		10	Measles		2
Cyanosis		4	Neuralgia of the heart	2	
Debility	8	1	Obstruction of the bowels	1	
Diabetes	1		Old age	11	
Diphtheria	2	17	Perforation of bowels	1	
Disease of the heart	25	1	Paralysis	6	
" " kidneys	1		Pelvic cellulitis	1	
Drowned	3	1	Rheumatism	1	
Dropsy		4	Sclerosis of the spine	1	
Dysentery	2		Septicæmia		1
Effusion of the brain		1	Softening of the brain	3	
Erysipelas	1	1	Stricture of œsophagus	1	
Enlargement of the prostate	1		Suffocation	1	1
Fatty degeneration of the heart	2		Suffocation, illuminating gas	1	
Fever, gastric		1	Syphilis		3
" puerperal	1		Tumor	2	
" scarlet		9	Ulceration of the liver	1	
" typhoid	9	2	Uræmia	4	
Gangrene	2		Whooping cough		1
Hemorrhage	4				
Hernia	1		Total	249	181

Army, Navy & Marine Hospital Service.

Changes in the Medical Corps of the U. S. Navy for the week ending April 30, 1892.

HENEBERGER, L. G., Surgeon. Detached from U. S. S. "Iroquois," and granted three months' leave of absence.

PAGE, J. E., Assistant-Surgeon. Detached from U. S. S. "Iroquois," and ordered to the Receiving Ship "Independence," at Navy Yard, Mare Island, Cal.

WAGGENER, J. R., Surgeon. Detached from U. S. S. "Kearsarge," and Naval Hospital, New York, and placed on waiting orders.